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Post-Graduate Basic Training College
Banipur, Po. Balgachi, 24 Pgs.

Child Development

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ILSE FOREST

BROOKLYN COLLEGE

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CHILD DEVELOPMENT

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Preface

This book is intended as an introduction to the study of child development. Throughout its chapters, attention is centered upon the dynamics of child behavior and the role of environmental factors in determining the course of child growth. The importance, at different ages and in different circumstances, of adult and peer-group interaction upon the child's concept of himself and his consequent attitude toward others is a major theme. Conditioning and laboratory-tested special methods of teaching as means of changing behavior are studied in the perspective of a consistent field theory.

True incidents are frequently used to point up the discussion throughout the book, which is the outgrowth of many years' experience with children and young people in a variety of situations as well as of university study. In no case has the quality of such an incident been altered intentionally, but every precaution has been taken to guard the identity of individuals.

The author wishes to thank the authors, editors, and publishers who have granted permission for the use of copyright material. Among them the following have allowed the reproduction of extended quotations, essential in the development of the text discussions: Leonard Carmichael, Director of the Institute of Sensory Psychology and Physiology, Tufts College; W. W. Norton & Company; Columbia University Press; and Harper & Brothers.

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ILSE FOREST

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CHAPTER I

Toward Understanding Children

> The novelist who tells the story behind the behavior and development of an individual gives us detailed data about his parents, his siblings, his character, his intelligence, his friends, his status. . . . Psychology has to fulfill the same task with scientific instead of poetic means.
>
> KURT LEWIN [1]

CHILDREN'S NEEDS AND THE TEACHING PROFESSION

All children have the same basic needs for security, affection, and successful adaptation to the demands of the society in which they are growing up; the profession of teaching is especially dedicated toward helping satisfy these indispensable requirements for happy and productive living. This orientation, perhaps more sharply defined today than ever before in the history of modern education, presents a real challenge to the teacher. It makes exacting demands not only upon his theoretical knowledge about the learning process and his skill in presenting subject matter, but also upon his ability as a mature person to understand and accept the behavior of the less mature persons who are his pupils and upon his skill in guiding them in the attainment of their proper goals.

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[1] Kurt Lewin, "Behavior and Development As a Function of the Total Situation," in Leonard Carmichael (ed.), *Manual of Child Psychology*, p. 792. Complete publishing data for all references are given in the Bibliography at the end of this book.

The job of teaching thus becomes both difficult and exciting, since, although all children have the same fundamental needs, no two of them will respond in exactly the same fashion to the classroom situation or to the teacher's techniques of guidance. Even identical twins, growing from one fertilized egg, differ at birth because of differing uterine and birth conditions. For instance, one twin is born first, this fact assuring him of certain rights, privileges, and responsibilities, legally defined and otherwise, while the other has the status of the second child. To take a more dramatic illustration, in more than 10 per cent of identical births, one twin is born dead. Obviously, had prenatal and birth experiences been identical, both would be born alive or both dead. By the time a very brief period of postnatal life has been lived through, differences in the physical and social environment of the nursery, the ways in which a child's needs have been met or neglected, the satisfactions he has enjoyed, and the frustrations he has endured have increased and accentuated the differences between any two children in the same family many times beyond what these differences were at birth.

The teacher of a primary or intermediate grade, therefore, finds that from the very start he must deal with a group of pupils in whose cases successes and frustrations in their family and community relations as well as their earlier school experiences have resulted in 25 or 30 widely differing personalities, prepared to react in as many different ways to current and future experiences. All these boys and girls require guidance, many of them, fortunately, only the warm and friendly counsel of a mature adult who knows what to expect of "normal" or "average" first- or fifth- or seventh-grade pupils and how to get from them their best efforts to learn and to grow up. Some, however, demand more special help, because their needs have been unfulfilled in some measure during their earlier years. A few may require more specialized and prolonged help than the best-trained teacher is equipped to give, or should give even though equipped, because of his obligations to the class as a whole.

The greater the amount of detailed information the teacher can have about the parents, siblings, character, intelligence, friends, and status of each of his pupils, the better. Like the psychologist, the educator wants the story behind the behavior and development of the individuals with whom he is working. In the case of those pupils whose reactions are a puzzle, both to their elders and to themselves, it becomes very important to know as many details as possible about their earlier experiences. The modern student of child development holds it to be an axiom that no event in behavior is the result of chance: each has its roots in previous experience.

When a teacher has obtained all the information he can about a pupil who is in difficulty, he must be able to assess his own competence to be of help in this particular case; he must answer to his own satisfaction these questions: Is this child's difficulty one which can be met and at least lessened through a satisfactory school experience, or does it call for intensive therapy? Is the best sort of teacher-pupil relationship adequate for this child's needs, or should he be given the opportunity of relating to a psychiatrist or other therapist? Is this behavior difficulty likely to be solved in the school, or should the school merely supplement the help given in a clinic or psychiatrist's office?

The Teacher's Resources

The well-trained teacher today knows how to use available resources in meeting his responsibilities effectively. These include observation, conference, the study of research findings and case study material, and, when indicated, the initiation of a thorough study of a pupil and his whole environmental setting to determine how far his needs are being met and to make an intelligent plan for the future.

Successful observation is marked by interest, sympathy, and objectivity on the part of the observer. Through training and experience he learns not to let the first two attributes interfere with the third. Interest and a warm feeling for children motivate good observation; they create a concern for "what makes children tick," and this, in turn, encourages taking careful steps toward objective inquiry into the matter. No interested observer of child behavior is ever completely and continuously objective, completely aloof from the individuals and situations he observes, since he is, of necessity, a part of these situations and, to however slight an extent, a factor in the behavior which he records. The trained observer, however, knows how to evaluate *his own observations* objectively and also how to use certain techniques which direct and control his study of relevant and important circumstances. For example, he may use a device known as a "sociogram" to chart an individual child's position in the class or peer group, thus discovering by objective means whether a youngster is a leader, a more or less desired companion with many or few friends, or an isolate. To determine intelligence and school achievement, standard tests are available; certain objective measures of physical growth and sensory acuity may also be rewarding. The sociodrama, an activity in which members of the group play out situations which they recognize as being important to them, is an educative experience for the class and may prove to be a very good way of clarifying the teacher's observation of other events in the classroom.

Conference with other adults who know the children in a particular class and exchange of records and impressions are very helpful. In many good schools today, these exchanges are conducted on a high professional level. Interchange of ideas with administrators and other members of the staff is important, for instance, when a teacher is trying to decide whether or not to carry on his work with an individual pupil without getting outside help.

As a result of fifty years of modern child study, there is now available a considerable amount of factual information about how children develop, drawn from more than one scientific field. Some research groups, such as that of Dr. Arnold Gesell and his associates at Yale, have advanced significant generalizations, based on prolonged and extensive study, about the growth process. One such generalization is the "structure-function" principle. According to this principle, growth in the ability to control behavior and to advance from the random kicking and crowing of the little baby in the direction of the ability to run and throw balls and converse intelligibly must wait upon growth changes in neuromuscular structure. While other researchers, on the basis of *their* prolonged and extensive studies, may wish to modify this conclusion by stressing what environment can do to hasten or retard inner growth changes, the thoughtful student will give careful attention to its basic truth and refrain from trying to teach a child to skip or sing on pitch or wield a sewing needle until he is "ready" to do so.

Really "going to town" on a thorough study of an individual child requires industry, patience, and skill. It is nearly always rewarding, although the reward is proportionate to the insight, sound knowledge, and resourcefulness of the person who undertakes the job. Contemporary authorities in the field of child guidance underscore the importance of knowing as much as possible about the child's environment as well as about his biological and psychological traits. The causes of behavior are to be found not only within the individual, nor yet wholly within the environment, but in the way this particular person affects and is affected by this particular set of physical and social circumstances.

What Are Sixth Graders Like?

The teacher who is about to teach, for instance, a sixth-grade group for the first time or, for that matter, the one who would like to refresh his memory for the fifteenth or twentieth experience with sixth graders may turn to original research publications or any number of books about child development that present the results of research. From such sources, he may be reminded of the varying stages of physical maturity probably to be found in his class. Some of the pupils are still "little boys" and "little girls," who are likely to have reached the stage known as the "maturity of childhood" but who are children still. Probably the majority will be preadolescents; some will be actual adolescents. The very fact that the class will, in all likelihood, represent these three differing stages of physical growth will alert the teacher to possible difficulties in getting the group to function well as a whole.

Obviously, too, the needs of children, preadolescents, and adolescents make varying demands on the teacher as a group leader. A study of other people's records of sixth-grade pupils, as well as any previous records of the teacher's own, will show that these children will have a wide variety of interests, that they may be expected to respond enthusiastically to a rich curriculum and good teaching methods, and that, if they have been well taught in earlier grades, the group as a whole will be sensitive to community problems and ready to study them eagerly, even though maturity of insight may vary greatly when individuals are compared one with another. There will be children who have not yet attained typical expectations for persons their age in every group, but, on the whole, sixth-grade pupils are capable of taking a large measure of responsibility for themselves and their behavior and of showing initiative and skill in managing both their group relations and their curricular activities.

It goes without saying that, in the case of some sixth grades, none of these generalizations will hold to any extent, that, in others, the picture will be one of delightfully "typical" sixth-grade pupils, that still other groups will fall between the two extremes. However, a perusal of the good available information about the general qualities of any age group will help orient the teacher toward his class, whether it be a third grade or a sixth or a seventh. With such an orientation, he can then judge whether his group is average or, in one direction or the other, not average.

WHY ARE SOME CHILDREN SO "DIFFERENT"?

Children differ, as people, one from another, even at birth. But what makes some of them so different from others in their peer group either under special circumstances or in their general behavior? On the surface, the following cases are not easy to assess accurately:

The school bus was due to take a group of 20 first-grade children home on the first afternoon of the new term. It was delayed because of motor trouble and arrived at the school one hour late. The principal and the teacher explained to the children why the bus would be late and also explained that their mothers were being telephoned so that no one at home would worry. An interesting audio-visual program and a snack of juice and cookies were planned for, and everyone seemed quite happy about the arrangements. When the bus finally made its rounds, 19 little children bounced down the step and greeted their mothers happily when they reached their own front doors. But with Mary it was different; she burst into hysterical crying when she saw her mother, clung to her, and would not be comforted. Her emotional outburst did not subside until late in the evening, and started up again in the morning as though it had never subsided. When the time came to take the bus for school, Mary again clung to her mother and cried that she would never, never leave her again because she might not be able to get back. There followed six weeks of readjustment, during which Mary refused to stay at school unless her mother stayed with her. So great was her anxiety that the school psychologist insisted that this support be given the child, even though it was an inconvenience to her mother, her teacher, and indirectly to her classmates.

As an assessment of this experience of Mary's, there is no doubt that being detained an hour on the very first day of school would be upsetting to many first-grade children if grown people at school were unsympathetic or failed to provide explanations, reassurance, and diverting experiences. In this instance, however, the adults proved to be both understanding and resourceful, with the result that 19 children took a long first day at school in their stride and enjoyed the good things provided for them. Why should one tall, well-developed little girl, on the surface "normal" and well adjusted, become so disturbed? What had happened to Mary to cause her so much anxiety because her separation from her mother was prolonged a short while? Having finally allayed the immediate symptoms of distress and persuaded her that it was quite safe to stay at school by herself, in what ways should her mother and teacher cooperate to strengthen Mary's sense of security and confidence? Has Mary's mother stayed with her little girl too constantly, or has she left her in other people's care too much? Is the child jealous of the small brother who is too young to go to school and stays home with mother? Has anything happened, in Mary's relationship with her mother, to shake her confidence that her mother will be there to receive her when she gets home? What other experiences of a threatening sort has Mary lived through?

Or there is Sandra, whose school record is excellent and who seems to her teachers to be a likable enough twelve-year-old. Why is Sandra never invited to the other girls' parties? Why is she never with the "gang" of laughing, teasing, arguing junior high school youngsters at the candy store snack bar? According to her former teachers, Sandra was a popular little girl in the middle grades.

Sandra is younger than her classmates and is considered to be very bright. Is she supercilious or unfriendly with her peers as a result? Or is she becoming too shy and reticent? Is she simply an immature little girl, not capable of coping with the junior high school crowd because her interests are so different from theirs? Or does Sandra's mother frown on snack bars, "smart" adolescent witticisms, and the like, or perhaps feel annoyance at any sign that "her little girl" is growing up? How does Sandra's father feel toward his young daughter?

John is a leader in the seventh grade. He excels in all activities involving group participation; he is perceptive to an unusual degree in his relationships with his classmates. But assignments requiring much reading are very difficult for him, since his reading ability is not quite that of an average fifth-grade pupil. The school records show that John and about half of his present classmates had a "bad start" in reading, because of poor teaching in one of the primary grades. Yet the other boys and girls, several of them less intelligent than John, as estimated by intelligence tests, have managed to catch up. Why has John stayed behind? Last year he made distinct progress while he was seeing a remedial teacher regularly; this year, with just as much remedial help, he is making no progress at all, and he is reacting to his failure with growing anxiety. John's father is very much distressed, since he hopes John will presently enter his own alma mater and graduate from college with distinction, as he himself did. There seems to be a fine relationship between John and his parents, and he is certainly affectionate and protective toward his younger brother. John's teachers are at a loss for the moment; as they study John's earlier home and school history in an effort to reconstruct the "story behind" his difficulty, they are turning to research studies and published case material to strengthen their interpretations.

Miss Jones teaches a sixth grade made up of underprivileged children in a "problem area" of the city. She rates with the school authorities as excellent in discipline and classroom management. The atmosphere in her classroom is warm and friendly. Why can't she do anything with Bill? His home is, if anything, less impoverished than those of most of his classmates. Both his father and mother are working, and his older sister works part time. Bill seems to be well nourished and is always neatly dressed. Bill is just this side of being a confirmed truant; he stays out of school at the least shadow of an excuse and, when he comes, Miss Jones finds him surly, impudent, lazy, and constituting her one "discipline problem." Miss Jones says Bill lies frequently and that he is suspected of having been involved in a recent week-end outbreak of vandalism on school property. Of course, his teacher last year was just out of college and her classroom discipline was very poor. The group as a whole was in bad shape when Miss Jones took the class over. But then, nearly all of Bill's present classmates were his classmates last year as well. They have responded beautifully to the present classroom situation. Bill has average intelligence; when he can be forced or cajoled into making a little effort his achievement is good. Is it in Bill's best interest to use either force or cajolery? Can Miss Jones work out a really effective plan for Bill with the help of the school's well-trained and progressive-minded principal, or is more specialized guidance indicated?

PROGRESS IN UNDERSTANDING CHILDREN

Fifty years ago only the very exceptional teacher would have thought that Mary's anxiety about being detained late at school required any prolonged sympathetic treatment. If Mary were of an age at which school attendance had become compulsory, she would have been obliged to come to school and do her work, "or else." Probably Mary's mother would not have considered going to school every day for six weeks, even had the school permitted her to do so. Sandra's poor adjustment to her schoolmates would almost certainly have gone unnoticed, especially since Sandra would have been such a successful and satisfactory pupil from the school's point of view. John would have been hounded and threatened until his work was "passing" and, had he failed of this achievement, the most hackneyed threat would have been carried out: John would have failed of promotion. Almost certainly corporal punishment would have been the answer for Bill; if this made a truant of him, there were always truant officers and disciplinary schools or reformatories to take care of such as he. A few Johns and

Bills might have had the rare good fortune of meeting a gifted teacher who, through sheer love of youngsters and intuitive understanding of their needs, might have helped John over his reading difficulties and started Bill on a new and more socially acceptable tack in his school career. By and large, however, the outlook for the child who is different was dim before the era of modern child study.

Although no child specialist of today would be willing to assert that we know all the answers, currently the outlook for effective programs of child guidance and education is radically better following a half century of research and experiment. When William James, of Harvard University, wrote his *Talks to Teachers on Psychology* in 1900, little was known about effective ways of encouraging the simplest sort of "habit formation" or learning. The next ten or a dozen years saw a great advance in the development of methods of teaching based on the laws of association; Edward L. Thorndike, of Columbia University, and Charles H. Judd, of the University of Chicago, were leaders in this attempt to build a science of teaching which could be used to make school learning easier and more satisfying and, ultimately, to diagnose difficulties, such as John's trouble with reading, and to introduce remedial measures.

Interest in the dynamics of human behavior stimulated research in the field of infant behavior. What does the newborn baby bring with him in the way of equipment for learning? Is he possessed of a repertory of "instincts" all ready to initiate appropriate ways of behaving when he will need these in order to adapt himself to the world in which he finds himself? Or is native equipment limited to a very few organic drives and to equally few patterned responses to outside stimuli?

In contrast to the long repertory of inherited "instinctive tendencies" with which James and Thorndike credited the newborn child, John B. Watson [2] reduced infant behavior to three typical reflex responses, appearing in connection with three proper or adequate outside stimuli, and resulting in three basic emotions: fear, love, and rage. Loss of support, a stimulus applied in the laboratory by dropping the infant upon a pillow, seemed to Watson to result in reflex activity expressing fear; fondling and warmth resulted in reflexes he took to be expressions of love; rage accompanied restriction of the infant's movements. Watson conceived of education as a process of building upon these original responses by a method known as "conditioning." Through conditioning the child would learn to respond to a wide range of stimuli in the ways approved by his elders.

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[2] John B. Watson, *Psychology from the Standpoint of a Behaviourist.*

A simple example of how conditioning can be deliberately and planfully employed as a method is the laboratory experiment of conditioning a baby to respond with a "fear" reaction to the sounding of a bell. This reaction may be taught by ringing a bell at the same time the infant is dropped upon a pillow. When the two stimuli, ringing the bell and dropping, are given together a sufficient number of times, the bell will presently be sufficient to call out the fear or "startle" reaction even though the baby is not dropped.

Watson was criticized by other investigators, notably Sherman,[3] on the ground that his identification of the baby's early fear, love, and rage responses was subjective. For instance, a group of trained people observing infant reactions on a screen could not distinguish between fear and anger reactions as these were projected. Certainly Watson's description of the education process was oversimplified. He believed that, given a blueprint of a desirable adult character, this character could be developed in any normal child, simply by controlling the stimulus-response process. Such control would mean widening the range of stimuli and also modifying the responses called forth by a liberal use of approval for "good" responses and a judicial use of disapproval for poor responses. Our present thinking about child development accepts conditioning as a fact but does not accept it as an adequate explanation of any individual's personal growth. However, at an earlier period in modern child guidance, serious and successful efforts were made to manage the conditioning process so that desirable changes were brought about in behavior in specific situations.

An example of how conditioning was directed planfully in helping a little girl recover from an unpleasant experience is found in the following anecdote concerning three-year-old Sylvia: Sylvia was enrolled in a nursery school connected with a big state college. The first day of the term, her mother brought the child to school, using the imposing main entrance to one of the college buildings. As Sylvia entered the broad front corridor, already having shown signs of apprehension in coming through the great door, many students were passing to and from their college classes. The child became so confused and terrified that she had to be taken home. A week later, after a conference between her mother and the nursery school teacher, Sylvia was induced to start for school once more; but this time she was brought in by a side gate and entered the nursery school play-yard directly. Although she had dawdled about getting ready to come and seemed a little apprehensive on her way to the college building, she was at once attracted by the play equipment and the big white bunny in his hutch. She seemed to enjoy herself all morning and after that came to school regularly. She dawdled less about finishing breakfast and getting ready to start as the days went on; soon she was actually hurrying her mother in order to start early. After a matter of weeks, during which school had called forth many reactions which were pleasurable, she was invited to come in by the main entrance. She was timid about accepting this suggestion but responded to her mother's encouragement and was commended as being a "big girl." After a few successful repetitions, she was able to use the main door without showing the least apprehension. Her mother and her teacher were immensely proud of Sylvia's success.

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[3] Mandel Sherman, The differentiation of emotional responses in infants, *J. Comp. Psychol.,* Vol. 7, 1927, pp. 265–284, 335–351.

There is no doubt that this technique of helping Sylvia master her apprehension in a particular situation was well planned and skillfully executed. The unpleasant first experience was allowed to dim out; then she was introduced into a delightful play group by a pleasant, reassuring entrance. School was fun. There were slides and swings and a sandbox; there were boys and girls to play with, animal pets to watch and tend. The teacher was a friendly, permissive person. By the time Sylvia was invited to try the big door and the noisy corridor again as a means of entrance, she knew she was on the way to *her* school, where many pleasant things awaited her.

After she had used the main door a few times, the originally frightening entrance did not disturb her in the least.

When the incidents just narrated happened, at the end of the 1920's, the outcome of the careful teaching process employed was scored as a complete success. Today both the process and its results would be evaluated somewhat differently, even though success in changing the child's behavior cannot be questioned. Several of the other three-year-olds had endured the college corridor without showing any special apprehension. Since Sylvia was an exception, probably she was at that time a little less secure than they. Was the underlying reason for her insecurity uncovered by this method? Was the improved acceptance of a situation that at first aroused apprehension entirely due to the skillful manipulation of satisfying experiences? Or did the very fact of receiving so much care and attention from her mother and her teacher contribute to relieving any basic insecurity that might have been troubling Sylvia, thus building her up so that she, as a person, could cope with a situation which once had frightened her?

In the intervening years, new insights into the processes of human growth and development have sharpened our perceptions concerning the many factors which enter into any learning situation. The "gestalt psychology," introduced from abroad, raised grave doubts as to the adequacy of any "stimulus-response" piecemeal explanation of child learning. The writings of the German gestalt psychologists, Wilhelm Kohler [4] and Kurt Koffka,[5] were available in translation by the middle 1920's. These men emphasized that the learner or problem-solver reacts to a total learning situation and that the pattern of the whole situation determines the character and importance of each of its elements, just as the ground of a textile design determines the characters of the figures woven into it. Insight into *relationships*, the grasp of a *configuration* or pattern, thus becomes the crucial point in solving an arithmetic problem or learning how to stand on a chair to reach a high shelf, just as it is the important factor in appreciating a textile design.

[4] Wilhelm Kohler, *The Mentality of Apes*, trans. by E. Winter.

[5] Kurt Koffka, *The Growth of the Mind*, trans. by Robert Ogden.

The contributions of the gestalt psychologists were strongly supplemented and reinforced by contributions from other fields to the study of child development, especially from biological science. These underscored the need for studying the "whole" child, for a thoroughgoing organismic orientation in the field of child study. Finally, the late Kurt Lewin applied the field theory as this had been adapted by physicists to problems of social psychology, thus opening up a new approach to the study of behavior. Lewin defined a field as a "totality of coexisting facts which are conceived of as mutually interdependent." [6] In relation to human behavior, Lewin described such a field as a "life-space," and said, "In order to understand or predict behavior, the person and his environment have to be considered as *one* constellation of interdependent factors." [7]

In order to understand and guide a child, Lewin thought, we must understand the field as it exists *for the child himself* in addition to being conversant with the way the situation looks to his parents and his teachers. For this field as the child sees it, the child's "friendships, conscious and unconscious goals, dreams, ideals, and fears are at least as essential as any physical setting." [8]

In Sylvia's life there were many other facts besides the fact of going to nursery school, some of them, perhaps, directly related to her fear on her first arrival. While these were certainly not ignored in helping her adjust to the new situation, helping her achieve success in one specific experience threatening to her received the main emphasis. The aim of the whole elaborate teaching process was directed toward removing a symptom of insecurity. Symptoms may be disturbing and distressing; it may be very important, both to the individual and to his associates, to try to remove them. For instance, it is important that John be given careful instruction in reading and plenty of well-planned practice in this skill; it is imperative for the rest of the class, as well as for Bill, that the hostile behavior, which is a symptom of his basic anxiety and fear, be reduced as far as possible. Granting this, we now think that, nevertheless, there can be little permanent improvement in overt behavior until the cause of this behavior is understood and the child can thus be guided intelligently toward helping himself. Today the emphasis is upon child *learning* rather than upon adult *teaching*, on helping pupils gain confidence and security through successful participation in a social process, whether the process is at the moment concerned with a basic routine, such as toilet training, or with undirected group play or with interesting school activities or with specially planned sessions with a therapist. To become a happy, healthy person, the child must be socially successful; the ways in which he responds to learning to control elimination, learning to walk or run or throw a ball, learning to read and write and conform to school discipline must meet the standards of the culture in which he lives.

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[6] Lewin, *loc. cit.*

[7] *Ibid.* Italics in the original.

[8] *Ibid.*

"In this," writes Erik Erikson,[9] "children cannot be fooled by empty praise and condescending encouragement. They may have to accept artificial bolstering of their self-esteem in lieu of something better, but their ego identity"—hence their inner confidence —"gains real strength only from whole-hearted and consistent recognition of *real accomplishment*—i.e., of achievement that has meaning in the culture." It is toward helping children gain this "real accomplishment" that our present study is directed.

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[9] Erik Homburger Erikson, *Childhood and Society*, p. 208. Italics inserted.

CHAPTER II

The Beginning of Life

. . . general growth of structure and function always occurs *in an organism that is in an environment.*

LEONARD CARMICHAEL [1]

THE START OF A NEW LIFE

The study of child development begins where individual life begins, with the fertilization of the ovum. There must be life in the uniting parent cells, at least in the ovum, in order to start a new life sequence; this antecedent life is the life of the species. The parent cells trace themselves back through the generations, enjoying an immortality not given to the other cells of the organism; the new life which begins with their union and which will end with the death of the new individual is known as an *ontogenetic,* in contrast to *phylogenetic,* life sequence.

Each parent cell presents the new organism with 24 microscopic filaments called "chromosomes." The chromosomes carry elements called "genes"; arranged on the filaments like beads on a string, the genes are the bearers of hereditary traits. So, from the moment of conception, the new individual is equipped with 48 chromosomes bearing the traits he inherits from his forebears, half of which come from his father's family, and half from his mother's.

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[1] Leonard Carmichael, "The Onset and Early Development of Behavior," in *Manual of Child Psychology,* p. 140. Italics inserted.

The 48 filaments arrange themselves neatly in pairs, one of each pair being a paternal chromosome, and the other a maternal. The reader will see from this that the differences among children of the same family are readily accounted for and also that an individual child may inherit any one of a very large number of combinations of genes.

The question of how far the physical inheritance through the genes may influence the growth of the new individual has given rise in modern times to a great deal of discussion, both scientific and popular. There is universal acceptance, of course, of certain incontrovertible facts proved by the scientific study of genetics. It has been demonstrated that every event in development affects the subsequent ones; for example, once the sex of the individual is determined, the individual is limited in certain ways as to how he shall grow. This determination is made through a chromosome transmitted from the male parent. There is also agreement that certain physical traits, such as eye color, hair color, color blindness, and many others, are directly transmitted through the genes. Many authorities hold that the sensitivities that make for ability in mathematics and logic, artistic ability, skill in surgery, and so forth, are likewise genetically determined, although in the area of mental and emotional inheritance agreement is far from universal. Whatever the final word may be in this matter, the constant and powerful influence of the environment in determining the course of growth has now been demonstrated in many ways, and this influence begins with life itself. For the parent cells do not generate the new organism in a vacuum but within the uterus of a particular mother organism, and, from the very first cell division within the fertilized ovum, the new individual's growth is conditioned by this environment. Granted that some of this individual's qualities are inherent in the parent cells, these very qualities are affected by the fact that they are active within a whole new organism. The new organism is, in turn, growing within the maternal organism, and a particular set of circumstances, physical and social, is operating to determine the environment of the mother herself.

Speculations concerning life in the uterus, theories and superstitions about "prenatal influence," have been current since man first began to philosophize about the world he lives in and about his own life. Certain popular ideas die hard, even though they are completely without foundation in fact. Some people still look incredulous when they are told that a pregnant woman cannot "mark" her baby in the course of a vivid emotional experience accompanied by strong sensory impressions. Yet, scientifically speaking, such an event is impossible, even though one mother may be frightened by a fierce dog and, in due course of time, give birth to a baby covered by an inordinate amount of hair. According to our present knowledge, there is simply no connection between the two phenomena, even though our grandparents and their forebears, or most of them, would have related these events confidently as cause and effect. On the other hand, so close is the relationship between the mother and the developing child that it is impossible to assert, in the light of contemporary knowledge, that the mother's manner of life and her resulting organic condition are without their effect upon this child's growth.

THE PROGRESS OF PRENATAL GROWTH

The prenatal life of the child is divided into three distinguishable periods: the periods of the ovum, the embryo, and the fetus. During the first period, the fertilized egg is not attached to the mother's body but travels down from the oviduct, where it was fertilized, to the uterus. This early stage is something over a week in duration, and, even as the ovum moves down the tube, the process of development is at work which will presently form the embryo and its membranes. Two embryonic folds appear which join and make an enclosing sac. Gradually the sac enlarges and fills with a special fluid in which the embryo is immersed and supported in perfect equilibrium. As the days go on, the enclosing sac more and more completely surrounds the new individual. Other sacs develop and presently an enclosing membranous wall is perfected, which remains attached to the baby-to-be and also attaches its outer part to the wall of the mother's womb at an area called the placenta. The area of attachment, the placenta, involves two parts, one of which comes from the embryo and the other from the uterus (see Fig. 1).

The second period of prenatal life, that of the embryo, extends from the time the new individual becomes attached to the wall of the uterus to the end of the fifth or sixth week of pregnancy. During this brief time a marvelous process of change, cell division and subdivision, goes on which results in the appearance and differentiation of the systems and parts of the human body, so that the mother now bears in her womb a baby in embryo. This embryo is only 30 millimeters, or about 1 inch, long from crown to heel but is possessed of head, limbs, and torso, as well as of nervous, respiratory, and circulatory systems.

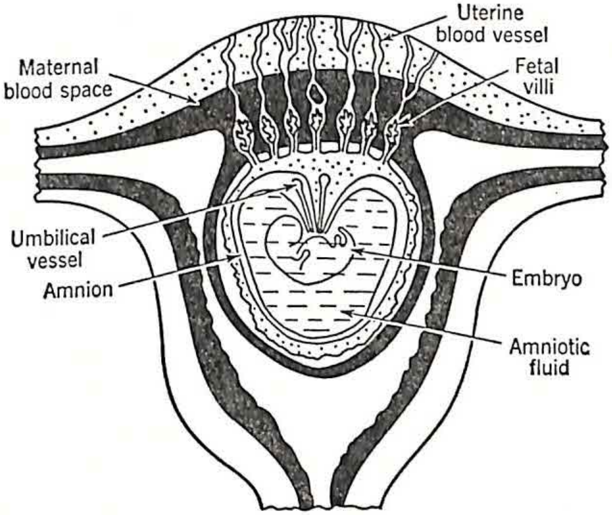

FIG. 1. The human embryo and its environment.

During the next seven months, called "the period of the fetus," the child grows very rapidly in length and weight, the central nervous system develops increasing perfection of structure, but no new parts are differentiated. The normal infant is already possessed of ten fingers and ten toes, appropriately distributed among two hands and two feet. The baby who will be born with too many digits or too few has already developed this anomaly. The first few weeks of pregnancy are thus all-important for the structural development of the infant.

LIFE IN THE UTERUS

As the fetus grows, it is enveloped in an elaborate series of membranes, forming a strong many-layered sac within which it is suspended in a fluid of very constant temperature. The circulatory system of the child is completely separated from that of its mother, but, in certain areas, only by a cell wall. So, by interchange through living membrane, oxygen and food materials pass from the mother's blood into the independent embryonic bloodstream. Carbon dioxide and other waste materials similarly pass in the other direction, from the bloodstream of the child into the bloodstream of the mother. This parasitic existence in a completely equable environment seemed to some students of child development to make life in the uterus idyllic and to make the desire to return to this complete comfort a strong unconscious drive in later life. More recently, the complete comfort of the unborn baby has been questioned. Research on the Rh factor and other studies have shown that there is a more direct seepage of blood between the bloodstreams of mother and infant than was formerly thought to be the case. Thus, the fetus, while effectively protected from mechanical disturbance by its water cushion and the surrounding membrane, is not completely protected from adverse conditions in the mother's bloodstream. Further, although this prenatal baby has no access to the outer air, he nevertheless breathes from the placenta through the blood and makes definite respiratory movements, although, of course, not the movements concerned in air breathing. According to a good authority, what actually happens is this: "Oxygen is stored in the blood cells of the baby's liver, which before birth is a blood-making organ and also acts somewhat like a lung, receiving fresh oxygenated blood from the placenta." Arched over the liver, the diaphragm in contracting actually pushes the oxygenated blood in this organ up toward the heart, the developing lungs, and the brain. Body movements of the baby assist the action of the diaphragm, twisting, flexion, and extension of the torso before birth, and, after birth, the familiar wriggling.[2]

[2] Margaret Ribble, *The Rights of Infants,* p. 10.

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The effort exerted in this breathing upsets the complete stability of equilibrium which was once thought to be the unborn child's. Besides, even though the baby "breathes" in this fashion, he is nevertheless believed to undergo an oxygen privation which gets progressively more severe as his nervous system develops, for the young nerve cells require a great deal of oxygen in the process of metabolism. A few specialists suggest that this privation is the root of all later anxieties. While it is certain that there is no direct connection between the nervous system of the child and that of the mother, *both systems feed from the same source of supplies.* Ribble comments that "there may be factors as yet unknown which distribute and balance these supplies between mother and child." [3] Overtaxing the mother's nervous energy when the high metabolic needs of the developing child are making inroads on the vital supplies they share might, from this point of view, increase oxygen privation and so deepen a primitive "anxiety" in the young organism by threatening its survival.

There is objective evidence that, using the word "feel" in a very broad sense, the prenatal child feels. The rate of the fetal heartbeat, for instance, can be altered by external stimulation. Also, there is evidence to show that, during the last weeks of pregnancy, the child in the uterus may respond to a loud sound by moving vigorously. This reaction, when present, may be due to actual hearing, that is, the intensity and volume of the sound may have penetrated the closed outer ear and the gelatinous liquid which before birth fills the middle ear, or the baby may have *felt* the vibrations through tactual contact with the mother's body. In either case, here is an instance of the unborn baby's response to an *external* stimulus. One mother, for instance, reported that her prenatal child became troublesomely active when she went to symphony concerts!

Carmichael states that the "possibility of respiratory experiences, or 'feelings of suffocation,' is certainly present, so far as may be judged from a knowledge of stimulation and response." [4] At the same time, however, Carmichael warns that "there is no evidence

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[3] *Ibid.*

[4] Carmichael, *op. cit.*, p. 131.

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that any *introspective* state actually follows from such stimulation."[5]

This is equivalent to saying that, while the unborn child reacts to feelings of suffocation when the oxygen supply is short, and to feelings of excitement, or perhaps annoyance, when stimulated by loud sounds, we have no justification for thinking that he is *conscious* of these feelings. But since we are convinced now that unconscious motivation plays so large a role in human behavior, we can hardly afford to say that these prenatal feelings are without their effect upon postnatal personality development.

STUDYING PRENATAL DEVELOPMENT

The study of how the baby behaves while he is still in his mother's womb is difficult by the very nature of the case. Direct observation of the unborn child can be made only through his mother's reports and through the use of X-ray examinations and/or various sensitive recording instruments attached to the mother's abdominal wall. A mother's reports are accurate in proportion to her degree of intelligence, objectivity, and interest in scientific accuracy; and no normal mother can be 100 per cent intellectual, objective, and scientific about the wonderful new life within her. X-ray examinations can be used only sparingly, since, if they are too frequent, they may endanger the unborn baby. When recording instruments are used to note how the child moves in the uterus, sometimes it is hard to tell whether the movement was made by the baby or whether the mother herself moved in response to the stimulus given.

However, in addition to direct methods, scientists use indirect ones. The unborn offspring of animals are operatively removed for certain experiments; sometimes human babies must be removed operatively during the course of pregnancy; and, of course, some babies are born prematurely without any operative interference. From these sources of observation and experiment, much has been learned about the child's development during the first nine months of its existence. For instance, it has been shown that at the beginning of the embryo stage, that is, about the end of the second week of pregnancy, "the auditory groove begins to be formed. . . . At about this time, also, the cerebral and optical vesicles begin to be differentiated, and the first limb buds appear." [6] At an age of about two months, an operatively removed embryo has been observed to make spontaneous arm and leg movements as well as a "protective movement" when touched by a finger, and it is known that many special reflexes have been established in healthy infants by the end of the sixth month of pregnancy. On the other hand, "Much of the brain substance and particularly the gray matter is quite incomplete at birth; the cells are unfinished, and some of the blood vessels which irrigate them are not yet developed." [7]

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[5] *Ibid.*

Even at normal birth the optic nerve and related structures are not entirely developed, although several investigators have elicited reactions to light in prematurely born infants. The receptors for stimulations to taste and smell and the specialized skin senses, which are able to respond to pressure, pain, heat, cold, and other stimuli from the external world, are also ready to act long before the child is born. Of course they do *not* act, since there are no incentives for them to do so in the environment of the womb.

Just as direct methods of studying how the baby grows and behaves before he is born have their limitations, so are the indirect ones also far from completely accurate. Operatively removed embryo kittens or guinea pigs are *not* embryo human babies; even though they may be healthy cat and guinea pig young, no direct inferences may be drawn from their behavior for the development of human beings. Operatively removed human embryos are removed because something has gone wrong: the baby cannot be born alive, and the mother is endangering her own life beyond hope by continuing the pregnancy. Also, these embryonic human beings are adapted to life in the womb; their behavior when prematurely thrust into the outside world may be very different from what it would be in their normal environment. The very fact that operative delivery was necessary indicates that something in the picture was not typical of normal pregnancy; so these specimens cannot be said to represent fairly young human beings of their developmental stages as a whole. Even prematurely born babies, arriving without an obstetrician's intervention, are "different," in the sense that they arrive ahead of time because of some unusual circumstance, and the behavior observed is therefore not that of an organism within its *proper* environment.

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[6] *Ibid.*, pp. 108*f*.

[7] Ribble, *loc. cit.*

SUMMARY

Comparatively little of what is known about the development and behavior of the child in the womb has been discovered by direct observation; nevertheless, embryologists have contributed a great deal toward our understanding of this period through research studies dealing with other mammalian young and with operatively removed or prematurely born human specimens. This information is important for the teachers and students of childhood, since development is continuous, and one cannot hope to understand later behavior without knowing its beginnings in prenatal life. The unborn baby is, indeed, dependent upon the mother's organism for food and the elimination of waste products, but it "behaves" independently of her in various ways. The heart, which may serve the individual for seventy years or more, begins to beat in the third week of embryonic life; the organism "breathes," that is, appropriates oxygen from the mother's blood, through the action of the liver and diaphragm; this breathing is helped along by movements of the trunk and limbs in the later period of pregnancy. Using the word in a very broad sense, the unborn child "learns" to adapt himself, he resists oxygen privation by exercise. Again, using the word in a very broad sense, the child in the womb feels; it seems probable that he feels threatened suffocation, although there is no evidence that the feeling is accompanied by any conscious state. Sensory equipment is quite fully developed in the healthy infant born at full term, although the capacity to see is less mature than the other sense organs, as the optic nerve and related structures are not fully grown, even though some premature babies react to light. All the senses wait upon the greater stimulus of the outside world to call them to complete action.

The Birth Process

Birth, or the process through which the child is transferred from the environment of the womb to that of the world outside, is a crisis in development which cannot fail to cause a certain degree of shock to the new organism, even though in normal births the effects of the trauma may be slight and passing. Contractions of the uterus rupture the membrane which surrounds the unborn baby and push him down the birth canal. During the birth process, the relations between the mother's blood supply and the child's are at first disturbed and then completely broken off. At this point, the child must either breathe for himself or suffocate. The birth cry is such a thrilling event because it indicates that the lungs, uninflated when the child is pushed from the womb, are going into action. Some scientists suggest that the onset of breathing is due to the stimulation of the air; others, that it is caused by the threat of suffocation due to a concentration of carbon dioxide in the infant's blood. K. C. Pratt,[8] a leading authority, suggests that the outside stimuli and the condition of the bloodstream cooperate in setting up lung breathing. As breathing begins, certain valves of the heart, which were inactive while the child was in the womb, also go into action, causing blood to flow into the lungs to be aerated, since the oxygen formerly derived from the mother through the placenta is about to be cut off. Once the infant is fully disconnected from its mother's bloodstream, no more nourishment is available until he takes food and digests it; no waste products are eliminated until his own organs go to work.

Babies, we are told, are born every minute. In our culture, many more of them survive than was the case before the development of modern obstetrics. Nevertheless, birth introduces a change in the infant's ways of living so drastic that it is threatening, if not always actually dangerous, to his survival. The risks of mechanical injury in the process of delivery or the fatal loss of oxygen supply are always present.

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[8] See Karl C. Pratt, "The Neonate," in Carmichael (ed.), *op. cit.*, pp. 190–254.

Once he is safely born, the child is surrounded by an environment in which there are manifold possibilities for learning, in contrast to the very restricted possibilities within the mother's womb. Opportunities for growth toward self-realization through interpersonal relations extend far beyond the organic relationship the unborn baby enjoyed with his mother. However, the entrance into this outside world of things and people is more or less strenuous and shocking, and, to the tiny and completely helpless little human being, the new environment is itself threatening. The psychoanalytic school of psychology first called attention to the psychological aspect of birth shock, and, more recently, other scientific workers have recognized the need for careful study of the newborn baby's psychological needs.

THE NEEDS OF THE NEONATE

Margaret Ribble, whose book *The Rights of Infants* should be on the reading list of every student of child development, writes: "We know that there are three primary hungers to which babies give strong evidence of reacting. Our babies are keenly oriented to food hunger, oxygen need, and aloneness." [9]

Ribble's thesis, which holds that all infantile experiences are of great importance to the direction of the infant's development, has been criticized in the light of further physiological, anatomical, and psychological evidence. Samuel Pinneau, in a critique published in *Child Development*, says of her theory that, according to evidence summarized in his article, "the most lenient conclusion would deny the presence of scientific evidence substantiating her general thesis, whereas a conclusion in keeping with the material here presented points to a definite refutation of her theory." [10]

Harold Orlansky, in an article published in January, 1949,[11] emphasizes the importance of constitutional factors and of the total cultural situation in determining the direction of growth, rather than the factor of breast or bottle feeding, to which Ribble attributes so much weight.

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[9] Ribble, *op. cit.*, p. 35.

[10] Samuel R. Pinneau, A critique of articles by Margaret Ribble, *Child Develpm.*, Vol. 21, 1950, pp. 203–228.

[11] Harold Orlansky, Infant care and personality, *Psychol. Bull.*, Vol. 1, January, 1949, pp. 1–49.

On the other hand, according to the present writer's limited but long experience with babies and according to the experiences of many other people who have worked directly with them, Ribble's researches seem to contribute invaluable insight into the behavior of the very young.

Specialists in scientific maternity care have long understood the importance of satisfying food hunger and oxygen need adequately, but the need for alleviating aloneness, fully appreciated by pre-scientific mothers and their helpers at delivery time, has received scientific attention only in more recent years.

In our culture, many mothers have been brought up to think of childbirth as a physical crisis triumphantly endured with the help of skilled medical and surgical assistance and a certain amount of "moral support" from their husbands. However, the fathers-to-be have customarily been withdrawn from the situation before things were really critical; they have been relegated to waiting rooms well before delivery. Once the baby was born, the cord tied, and the immediate hygienic routines accomplished, the child has been taken off to the maternity nursery while the mother was removed to her room to rest and recuperate. As a matter of fact, these procedures are still followed in the majority of hospitals for reasons of administrative efficiency, space economy, and the protection of the newborn from infection, but they are no longer thought of as ideal arrangements. It is now generally admitted that closeness to his mother is one important means of helping the baby survive the transition from uterine to extrauterine life, and of mitigating the severity of the birth trauma. Frequent and prolonged physical contact between mother and baby, approximating as it does their relationship before the crisis of birth, is considered desirable for both. As a result of this new emphasis in early postnatal care, some hospitals provide "rooming-in" arrangements for as many newborn infants as possible.

In response to our present concern for the very earliest social experiences of the young child, in which his parents play such important roles, there is a growing interest in "natural childbirth," a method of delivery in which the mother assumes conscious responsibility for the successful birth of her baby. As a part of this procedure, both parents-to-be are systematically instructed concerning the details of the birth process as well as the significance of the infant's behavior during the last weeks of pregnancy. Instead of being shut away in a waiting room while his baby is being born, the child's father is encouraged to be present during the whole process. Thus the parents and the child are cast in their proper family roles while the child is still in the uterus; they are ready to receive him when he is born and to begin immediately upon their important task of making him feel secure and welcome.

Natural childbirth changes the quality of the mother's experience in important ways. The delivery of her child is no longer in part a mystery to her, for she accepts a conscious role in giving him birth. During her pregnancy she is given exercises to condition her so that she may help herself; she is shown around the delivery room so that it no longer seems an awesome spot. Since she comes to the experience in a relaxed and confident state, muscles are not tensed, and pain is in some instances greatly alleviated. She is not expected to go through the process alone among strangers, since she shares the experience with her husband. She sees her baby brought into the world and is consciously with him when he draws his first breath, and the baby, even though the surroundings are those of an operating room, is born into his family. Unless she is physically unable to do so, the new mother at once begins the job of "mothering" her child.

As a result of her long and careful study, Ribble concludes that an emotionally healthy mother's loving care for her baby is crucially important for the baby's well-being. Not only his "psychological development," but also his physical survival and satisfactory growth, depend on it. The birth cry, Ribble emphasizes, does not mean that breathing is firmly established and all is well; it merely indicates that the child breathes. "It is true, of course, that the wailing infant breathes, but this he does with pitiful inadequacy. He has at birth an inner adjustment to make which is more drastic than that of an aviator or deepsea diver." [12]

[12] Ribble, *op. cit.*, p. 15.

It is vitally important, Ribble goes on to state, that the baby's inadequate breathing be carefully observed and that it be stimulated by "consistent personal attention." This personal attention can be really adequate only when it is given by his mother. Of course, she cannot actually teach him to breathe, but she can stimulate him in such a way that important reflexes come into action and fetal techniques are abandoned. "From being held, fondled, allowed to suck freely and frequently, the child receives reflex stimulation which primes his breathing mechanisms into action and finally enables the whole respiratory system to be organized under the control of his own nervous system."[13]

It is important that adequate breathing be hastened, since, while it is being established, "inner breathing or metabolism of the nervous system" is in progress and demands an adequate oxygen supply. If this supply is delayed too long, "the growing cells of the brain may suffer in consequence." So the sooner the mother begins to mother her baby in the sense of fondling it, holding it close to her, gently stroking its head, and doing all the other little things that healthy mothers do, the better for the baby. The early and peculiarly penetrating crying of the newborn is mostly an exercise in breathing; when it continues for several minutes, however, something should be done to help him get a more adequate oxygen supply. Gently stroking the head is an important means, as are provision for sucking on a pacifier and gently carrying the baby about. In fact, all the things a mother *likes* to do actually help her baby to outgrow his fetal ways and adjust himself to the outside world.

Thus the needs of mother and baby are reciprocal during the early weeks of the child's life: the baby's need is for survival and growing "trust" in his new environment; his mother's need is to mother him, thus making him safe and contented in his new environment. It is apparent, then, that close physical contact between the two is important and that hospital rules governing feeding and cuddling are a hardship to both which modern plans for maternity care are directed toward minimizing. Natural childbirth and rooming in are significant for both physical and psychological well-being for mother and child, not only "alike," but also "together," since well-being, to be complete, must be mutual. Parents who are sensitive to their children's needs from the beginning of these children's prenatal existence, who educate themselves for active roles during the birth process, are ready to welcome the newborn baby and accept responsibility for his nurture and guidance. In fact, they are ready to "enjoy" the baby, and out of their enjoyment grow his trustfulness and security.

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[13] *Ibid.*, p. 18.

Conversely, children who are not welcomed or are deprived of mothering do not thrive, as Ribble and other investigators have convincingly demonstrated.

Tom was a baby whose behavior seemed significant in this connection. His first three weeks were spent in the maternity nursery of the hospital in which he was born. His mother was seriously disturbed emotionally during her pregnancy, completely rejecting the child from the moment her condition became known to her. She did not wish to see him after he was born, so a temporary placement was made for him when she was judged ready to leave the hospital. Tom was a big, healthy-looking baby weighing nearly 9 pounds at three weeks; maternal rejection had not kept him from learning to eat vigorously and gain weight in satisfactory fashion. He had reacted to rejection, however, in other ways. Most babies when picked up and cuddled react by "accommodation"; they relax and seem to snuggle in the adult's arms. Tom, on the contrary, was an awkward, unyielding, and uncomfortable sort of baby. Picking him up and stroking him failed to soothe or please him during the first week in his temporary home. He slept very little, cried almost constantly, and could be soothed only by food. In response to his vigorous and incessant demand, the pediatrician in charge increased his feedings in quantity and variety and finally sent him back to the hospital for observation. No physical difficulty could be detected and he was sent back to his temporary home, still eating voraciously and crying a great deal. Here he gradually responded through the weeks to affection, play, and food. He vocalized early in the third month, thus showing that he had reached an inner balance of oxygen,[14] and smiled occasionally. When he was three months old, Tom was placed in a child-caring institution, a placement made necessary by his family's situation. At that time he still cried a great deal and gave little evidence of baby happiness. His enormous appetite still continued. To some of us it would seem that Tom comforted himself by eating for the mother love which was denied him.

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[14] See *ibid.*, p. 20.

Mothers have always understood that it was important to feed their babies. Modern mothers, for the better part of two generations, were taught by their doctors that regularity in feeding, accurate clock routine, was absolutely essential. Only quite recently has it been emphasized that it is of vital importance that the infant take pleasure in feeding. This fact, well understood by prescientific mothers, was for quite a time overlooked by modern pediatrics. It is not merely important to the child to have nourishment; it is important for him to suck and to suck contentedly, whether he be breast- or bottle-fed, for the mouth is the most sensitive region of his body, and, therefore, the exercise of the mouth gives him needed pleasure. The importance of the immediate establishment of vigorous sucking is evidenced by the well-being and general contentment of infants who nurse successfully. The average breast-fed baby in the first days of his life gets only a few teaspoonfuls of milk of low food value. He comes into the world with plenty of nutrients in his system, but he cannot use these until breathing and nervous activities have become well established, and in their establishment sucking is very important. Ribble calls attention to the relaxed muscle tension, the cessation of random movements, the improved color and temperature of the skin during nursing, and comments that the sleep which follows well-established sucking is "the beginning of true body rest and not the uneasy semiconsciousness of the newborn."

The full-term baby is equipped when he is born with the capacity to suck. Some babies begin to suck their fingers as soon as they are delivered. For these children, feeding is no problem, but in many infants the spontaneous mouthing movements present at birth are not well coordinated, and these babies need help in learning to suck. For instance, 40 per cent of 600 babies studied by Ribble had to be taught by opening their mouths, inserting the nipple well into the mouth cavity, and working the chin of the baby rhythmically up and down. Because of the transition from vegetative to active feeding, babies lose weight during their first days of life and begin to regain and thrive only in response to careful mothering. There is still some popular disagreement about the importance of breast rather than bottle feeding. However, psychologically oriented physicians, among them Ribble, are strong in their support of breast feeding, stating that it is without question the ideal method when conditions are normal. They cite evidence not only from the nutritional point of view but, above all, from the emotional one. The most important element in the nursing situation is the sense of well-being and security that is engendered in the baby. Children sometimes refuse food altogether when they are unloved; even more easily than in the case of adults, their food fails to "agree" with them if they are alone or discontented. Successful breast feeding is the newly born child's perfect bliss.

> Breast feeding is the first satisfaction a child gets from his mother after birth. This pleasure immediately begins to establish a focus on the mother and prepares the ground for the fostering of a continually richer relationship between them. As a result, the breast-fed baby is better nourished and his emotional development is smoothed considerably. For naturally, breast-fed babies tend to have more trust and confidence in their mothers and consequently are easier to lead and direct.[15]

Ribble also stresses the fact that an infant at birth has no capacity to acquire a sense of security *except in the feeding relationship:*

> . . . his whole psychological attitude toward the world and toward himself, as to adequacy or inadequacy, is started far back in his first experiences. As he nurses, he is getting his first taste of the outside world and the first grasp or hold of which he is capable.[16]

The establishment of a sense of security in a new and different world, as it were, in defiance of the birth trauma, is the goal toward which the emotionally healthy mother mothers and loves her newborn child. Aside from mothering and loving, there is no successful method of achieving this end.

[15] *Ibid.*, p. 19.

[16] *Ibid.*, p. 20.

CHAPTER III

Infancy

> Babies control and bring up their families as much as they are controlled by them; in fact we may say that the family brings up the baby by being brought up by him.
>
> ERIK HOMBURGER ERIKSON [1]

THE BABY AND HIS FAMILY

The child in the uterus affects his family indirectly from the time his birth can be confidently foretold. When parents-to-be are emotionally healthy, both immediately assume new responsibilities in connection with his arrival. Especially when the physician selected is sympathetic with the newer trends in obstetrical care, the mother prepares actively for her role in the birth process and the father too engages in self-education for parenthood. This holds not only in the case of the first baby but in subsequent pregnancies as well. The presence of an older child or older children creates vitally important adjustment problems toward the solution of which the parents' love and understanding of each other and of each of their children must make the major contribution. These problems will be discussed in later chapters; here we are chiefly concerned with the baby, who is beginning his job of controlling and bringing up his family, even while the family settles to its task of nurturing and educating him.

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[1] Erik Homburger Erikson, *Childhood and Society,* p. 65.

While in the uterus, the child's behavior might be observed by what to him were outsiders at certain times and under certain conditions, but only his mother felt his presence directly and was called upon to make definite changes in her way of living because of his existence. With his arrival, and especially upon his triumphal exit from the hospital, the external situation in the home is altered for every member of the family. The baby's care must take precedence over all other household routines; he must have a place to sleep and room for his layette and the various gadgets provided for his toilet and comfort. A certain amount of piercing sound must be endured as he cries spasmodically and thus develops his breathing apparatus. While no one nowadays thinks that the family can or should go around on tiptoes lest he be disturbed, the baby still requires some measure of consideration from everyone, for he must not be thwarted, which is exactly the opposite of saying that he should be spoiled. At this period of life, thwarting amounts to spoiling, although the results may not appear until the child is older.

> . . . any curbing of his natural ways at an early age may very well endanger the smooth functioning of delicate mechanisms that make it possible for the human body to live and breathe and have its being.[2]

When natural ways of satisfying organic needs are thwarted, they are replaced by unwholesome striving:

> Thwarted in one direction, the infant will take other ways to express himself and relieve tension, developing protective habits that distort normal growth, just as a plant that is kept from light will adopt another way of getting what it is after, twisted and distorted though that way may be.[3]

In order to develop naturally and wholesomely in the first months of his life, the baby needs physical warmth, devoted mothering, and a family setting that is loving, permissive, and, as nearly as possible, completely accepting of the new arrival. In Freudian language, this baby's life must be governed by the "pleasure principle"; only when he is much more mature can he be introduced safely to the "reality principle," which governs the lives of his elders. The only interference, if such it be, that the infant can tolerate is a skillful balancing of his functions in the interest of his ease and comfort. Babies are really secure when all members of the family accept these facts and permit themselves to be educated accordingly.

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[2] Margaret Ribble, *The Rights of Infants,* p. 72.

[3] *Ibid.,* pp. 72–73.

THE CHARACTERISTICS OF THE NEONATE

"Neonate" is the term applied to the baby from the time the umbilical cord is cut to the end of the first postnatal month.[4] During this period the child normally recovers from any minor injuries incident to the birth process. His sensory apparatus is brought into action by the adequate stimuli which were lacking in the intrauterine environment, and this activity results in the further maturation of the nervous system. His bodily functions reach a first tentative balance. The importance of adequate mothering in assisting these processes of development was indicated in the last chapter: the mother's gentle stroking and fondling assist the functioning of the breathing apparatus; successful nursing balances the whole organism; maternal affection expressed in singing or talking to the baby and in playing with him stimulates his sensory activity. The young baby is "stimulus-hungry," and skillful care helps satisfy this hunger.

The appearance of the neonate is prepossessing only to those who love him. Usually his skin is red; sometimes it is bluish or a little jaundiced; he has a generally wrinkled appearance due to his long immersion in fluid and to the fact that he has not developed much subcutaneous fat. His head is very large in proportion to his body; his abdomen is distended and his limbs are short, scrawny, and underdeveloped; he has almost no neck. He looks rather like a little old man. Relatives who haven't learned much about babies, sometimes even fathers, frequently greet the newborn with the tactless question, "He's awfully red—is he all right?"

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[4] This definition of the neonatal period is the one generally given in the field of infant behavior, following Gesell and Feldman. For further discussion, see Leonard Carmichael, "The Onset and Early Development of Behavior," in Leonard Carmichael (ed.), *Manual of Child Psychology*, p. 192.

The baby's bones are soft, since they are mostly cartilage; his muscles, too, are soft, as well as small and uncontrolled. He even has "soft spots," or fontanels, on his skull; these ease the passage of the head through the birth canal and allow for the rapid growth of the brain during the first two years of life. Body movements are random and uncontrolled, because of the immaturity of the nervous system and the softness of the muscles, so that his activities are restricted to wriggling and thrashing about. Only his repertory of reflexes, and it is a large one, is at all precise. A healthy baby has developed the reflexes required in breathing and swallowing; he yawns, sneezes, fans his toes when the soles of his feet are tickled, jerks his foot when tapped below the knee. Aside from these and other similar behavior items the neonate is completely helpless. His wholesome growth and his happiness depend upon the ministrations of others, particularly upon his mother.

THE FIRST YEAR

The rate of development during the first year of postnatal life is very rapid. During this period the healthy infant grows 50 per cent in height and trebles his birth weight. Well-developed neonates are able to raise their heads from a shoulder or pillow a few hours after birth, but that is about the extent of their postural control. At a year, the average child can stand erect and take a step or two. At birth, the infant makes blind seeking movements for the nipple; at a year, he can feed himself with a spoon, if not too tidily. Above all, at birth, he is a newcomer and a stranger, knowing no attachment to other human beings except his organic relationship with his mother. At a year, he is a part of a family pattern and has made many adaptations to family demands, desirable or otherwise. Also, by the time he is a year old, the family has made many adaptations to him, and his presence among them has altered the interpersonal relations obtaining between the family's other members. How far these achievements are the result of inner maturation and how far they are the fruits of nurture has long been a subject for debate among students of child development. The intricacies of this question are beyond the scope of this discussion, but two important positions may be explained briefly.

As a result of extensive and carefully conducted research, Gesell and others have described the structure-function principle mentioned in an earlier chapter as a determining factor in growth. This principle is that the development of structure must precede the development of function; that is, a specific way of behaving cannot be learned by the child until he has the requisite neurological maturity to carry out the new behavior. For instance, children cannot learn to walk until nerves and muscles are mature enough to permit walking; nor can they control elimination voluntarily until the sphincters are under the direction of the cerebral cortex. As a law governing physical growth and motor development, this principle is generally accepted, although it is emphasized by those who approach child study from the sociobiological point of view that the culture in which the child lives, the methods of education to which he is subjected, are important in determining when these functions will be perfected and employed.

Many studies of child growth have demonstrated that in the development of neuromuscular control and therefore of motor skills, an orderly sequence prevails: every child, for example, raises his head before he is able to raise his chest and shoulders, and turns and raises his whole body before he walks. The *sequence* is the same for all, although the *rate* at which the sequence progresses varies with the individual child. However, there are differences of opinion as to the reasons for this variation. Adherents to the structure-function school tend to imply that this rate represents a limit set by intrinsic or hereditary factors;[5] the sociobiological school of thought underlines the importance of mothering and other forms of nurture in determining the rate of growth. The possible effect of intrinsically determined limits upon social and emotional development is suggested by the structure-function theorists; it is minimized by the sociobiological school.

Regardless of basic theories about the relative importance of heredity and environment in the determination of rate of growth, all must agree that at birth the development of neuromuscular control as well as the degree of social awareness are practically

[5] However, they admit the effect of strong environmental factors in certain cases.

zero. The spectacular achievement of the normal child during his first twelve months, while possibly "limited" by native endowment, is certainly best described and understood in terms of the nurture which his family and the community provide.

At four weeks the infant is not only larger and stronger than he was at birth; he is, above all, better organized. "Multimillions of nerve fibers from millions of nerve cells have made new connections with each other and have improved their old connections with his internal organs and his muscular system." [6] His breathing is deeper and stronger than it was at first. Indeed, as Gesell phrases it, "All his vegetative functions are under better control, because the chemistry of his body fluids as well as the vegetative part of his nervous system has made adjustments to his postnatal environment." [7] His behavior, considering his stage of development, "is patterned, meaningful, and significant"; he is no longer just a "bundle of reflexes."

The precarious neonatal days are now over, and the first goal of postnatal growth, that of basic physical adjustment to life outside the womb, has been attained. The baby now seems positively to enjoy the comfortable features of his environment and to complain about the uncomfortable ones. He likes to look at a light or a strong bright pattern and cries if he is turned so he cannot see these pleasant stimuli. He cries for his food and grunts contentedly when he has eaten. He gazes intently at a human face or a window, even though he cannot perceive them as we do. Mothering has been successful so far; the affectionate quality of his mother's response to his expanding needs is now important in deepening his sense of trust. No social stimulation except that incident to feeding and caring for him is required at this point; for the month-old baby, his vegetative needs and his sensorimotor experiences constitute the most important part of life. He enjoys his bath, in the course of which his mother talks to him and plays with him. He dislikes being dressed, and, therefore, his clothing should be planned so that he is annoyed as little as possible. If he is successfully nursed, he usually drops off to sleep toward the end of the feeding process; a relaxed and contented month-old baby sleeps four or five periods during each twenty-four hours, in contrast to the seven or eight periods of the newborn.

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[6] Arnold Gesell and Frances Ilg, *Infant and Child in the Culture of Today*, p. 93.

[7] *Ibid.*

In these days, the baby sets up his own timetable for eating and sleeping; the alarm-clock schedule popular a generation ago has been rather generally discarded by physicians, since it is now understood that each baby has his own rhythm. This individual timetable relieves a tension that often arose between mother and baby during the old regime. When it was thought to be a matter of conscience to let the baby cry for his dinner until the clock indicated that it was time for him to be hungry or, conversely, to poke the baby awake when the clock indicated he should eat and not sleep, the mother was in conflict. Her maternal impulse to comfort her baby was restrained in favor of her sense of duty. The baby was thwarted and his growing sense of trust in his mother was jeopardized. Now there need be no such difficulty, for the mother is instructed to help the child establish what seems to be his own, self-chosen schedule; no reality principle need be introduced into the baby's pleasure-dominated life.

While in our culture the mother normally devotes her time to the baby and the father sees him at briefer intervals before and after work and on holidays, the more the father can and will participate actively in the baby's care, the better. One parent is not enough; the child needs to sense the affectionate concern of both. Although it is necessary to protect him at this very early age from too much contact with older siblings, in their interest and in his own, the older ones should help care for the baby. At four or five years of age to hold a baby can safely be accomplished only under careful supervision and for very brief intervals, but there is talcum powder to be brought from the cabinet, a forgotten towel to be returned to a rack, and even occasionally a bottle to be held very carefully.

Gesell and Ilg say that typically the month-old baby indicates that he wants sociability in the late afternoon or in the evening, but he wants very little and can make almost no vocal response. By the time he is four months old, the picture has changed a great deal. "He smiles at the mere sight of a face. He coos, bubbles, gurgles, chuckles, and even laughs aloud." [8] By this time he can manage his head well and likes to be propped in a sitting position. How much propping he needs varies with the individual baby. His eyes, barely manageable at one month, are now in active use for the inspection of his environment. His hands, usually fisted at one month, are busy in finger play; while he is generally not able to grasp a rattle or other toy at this age, he is very eager to try and can, in fact, manage to clutch. By this time play is as necessary to him as sleep. "He is working toward a three-phase cycle of Play Activity—Feeding—Sleeping—Play Activity—Feeding—Sleeping." [9] He enjoys his baby carriage; he loves to have people notice him, talk to him, sing to him. He needs his due share of notice from everyone in the household and from an occasional guest, for whom, however, he should be prepared by his mother. The guest should never enter suddenly and noisily, for this baby, young as he is, may begin to be frightened by suddenness and loud sounds, even if the occasion seems to be gay and pleasant.

When he is three or four months old or thereabouts, the pleasure-regulated life of the infant is shocked by a painful growth process, the eruption of a tooth, soon to be followed by another and another. He has known organic discomfort before, for he has almost certainly had colic pains, if nothing more. But when these disturbances have occurred, his mother was able to comfort him considerably by rocking him and stroking him and carrying him about. The sharp pain of teething does not yield to these methods of relief and, in the case of the breast-fed baby, once the first teeth are through, nursing becomes a painful process, and the mother involuntarily shrinks from the child at her breast. To the disappointment of not being relieved of pain by the mother's ministrations, there is added the experience of rejection, no matter how slight and transient this may be. The only activity which really helps the teething baby is biting, and this activity is firmly regulated by the reality principle. He may not bite his mother, and he is restrained from biting unsuitable things in his environment. Also, most children have intestinal upsets during teething; they are sometimes feverish and almost always very fretful. The adored family pet thus tries the family in new ways and usually creates tensions not present before. Frustration and a weakening of trust can be avoided only by intelligent efforts to support the baby's faith in his mother and his family, by comforting him as much as possible, supplying him with good teething rings, hard toys, hard crusts, and other things to bite on, and, in general, by looking at the situation from the baby's point of view.

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[8] *Ibid.*, p. 101.

[9] *Ibid.*, p. 103.

The seven-month-old baby can balance his head well and is usually gaining good control of his trunk. He likes to sit up and manipulate things and can manage his hands better than he could a few weeks earlier. Gesell and Ilg found that usually at this age fine finger control has not been established, but individual children known to the present writer have shown quite advanced coordination. One little boy at seven months amused himself by bending back the bristles of a broom, using thumb and index finger. Again, according to the Gesell norms, many children of this age are sedentary; on the other hand, some are getting about the house by crawling, creeping, hitching, or all three methods of locomotion.

The healthy seven-month-old baby enjoys having people around him and likes to play in the midst of his family. He vocalizes a great deal, usually possessing a wide repertory of sounds. These he uses to express pleasure at the approach of food or a familiar person; he can also scold convincingly when things do not go his way. When he is well and happy, he is delightful. It is most important for his personality development that he be assured continually of his charm and of the affection his family feels for him. He is becoming daily and hourly more independent, more of a person, and his wholesome growth will shortly require his acceptance of certain limits. This must be accomplished without hazard to his trust in his parents, a trust based on their complete acceptance of him. It is vital to his happiness that this acceptance of the baby as he is be unshaken and that both father and mother be prepared to allow him to grow up according to his individual needs and capacities.

Once the baby becomes mobile, a whole gamut of opportunities to get into trouble opens up. He must be protected from physical injury, since at this early age he cannot protect himself. There must be safe places, indoors and out, where he can explore and enjoy gross motor activity, in the course of which he gains control of his body. Not all babies creep; not all babies stand at ten months and take a step at a year. Some go through the locomotor sequence faster than others, but all well babies, at least, need the chance to practice their growing locomotor skills. Well-built cribs and strong play-pens provide railings, with the help of which the growing baby can pull himself up to his feet, and along which he can begin to move in an erect posture. Well-chosen toys encourage him to practice eye-hand coordination and to exercise his ability to manipulate with enjoyment.

On the other hand, by the end of the first year, many babies are impatient of play-pens; they want and need to investigate the home in which they live in a more extended fashion. They are getting acquainted with the world around them. Actually, their study of geography is beginning as they find their way about. For this reason it becomes necessary to protect the baby from unavoidable dangers in the home and to protect his family from his depredations. This needs to be done with the least possible prohibition and the best possible constructive planning, since prohibitions inhibit the wholesome tendency to investigate, while wholesome planning encourages this important urge to learn. Bric-a-brac and babies simply do not mix happily, so they should not be brought together. Table covers hanging temptingly within the crawler's or toddler's reach may cause disaster: physical injury to the child himself through his pulling something down on top of him; destruction of property valued by the older members of the family; above all, psychological damage to the child. Physical hurt as the result of exploration may make him fearful, and scolding easily develops a feeling that he is rejected. Early fear carries on to later experiences in home, school, and community; the child who doubts that he is accepted at home has difficulty in adjusting to new environments and frequently becomes a school problem. Lack of courage and confidence may make of a bright pupil a failing student; hostility growing out of a feeling of being unloved is a prolific source of school and community behavior problems.

By the time the baby walks alone, at a little over a year or thereabouts, he is able to learn many things independently about the world in which he lives. He is able, also, to do many things that annoy or frighten adults. Great care should be exercised to protect the child from the impact of adult annoyance and fear. The child's ego, his sense of personal worth and competence, is only beginning to grow and is still very weak and vulnerable. If it is damaged at this early stage, it can be temporarily or even permanently crippled. "Just as the twig is bent the tree's inclined."

THE SECOND YEAR

A baby learns many important skills during his second year. He learns how to walk more steadily, how to go up and down stairs, how to push a toy, how to pull a wagon. He learns how to communicate his wishes and feelings more effectively than he could earlier; he uses syllables, intonations, gestures, and, finally, words. He grows in his ability to size up his social environment; he makes many adaptations, some good, some poor, to the demands his environment makes upon him. In this learning his mother is his most constant guide, and the more securely she has established his sense of trust, the more easily she can help him now to go on toward another goal: that of autonomy [10] within the matrix of the family. When parents are mature and a wholesome family relationship therefore exists, the baby's father and mother are united in their aim, even though the father may be able to devote less time than he might wish to being the child's friend and playfellow.

During the first months of life the child learns either to trust or mistrust his environment, depending on the adequacy or inadequacy of his early nurture. On this early trust or mistrust will his later reactions to school and community be patterned. When the experience of feeding has been successful and pleasurable and the acceptance of the baby has been demonstrated through adequate mothering and a loving, permissive family atmosphere, trust will deepen as the months go on. New experiences *will be accepted confidently because of basic security.* With growing physical prowess and independence and developing social understanding the

[10] Cf. Erikson, *op. cit.*

child must also learn to trust himself. This self-confidence grows as he learns to govern his own actions in a way satisfactory to the people who make up his social environment. When, for some reason, he feels he is not living up to specifications, he tends to develop feelings of guilt and shame rather than the confident autonomy which is his proper goal. His successful achievement at this early and crucial stage of his development depends upon the behavior of his elders rather than upon his own.

The standards held for any child should be geared to his individual needs and abilities rather than to the ambitions his parents hold for him. In this connection, a right understanding of how statistically established "norms" of growth should be used in the guidance of children becomes most important. One child will master the skill of walking ahead of the published schedules; another will meet the timetable on the dot; another will be behind time. In each case the acceleration or the punctuality or the retardation may be noted profitably as an interesting fact, but the fact should be used as a way of understanding the particular child, not as a means of comparing him with the neighbors' children. Johnnie is twenty-two months old. He walks with the characteristic proficiency of thirty months; his ability to use his hands is likewise advanced. However, he uses only two recognizable words, while the child down the street knows many words. And he isn't too interested in being toilet-trained, although he will go along with this if reminded. This is Johnnie; and Johnnie, definitely not the child down the street, is the baby the family accepts and loves and learns from, even while encouraging him to grow up.

McGraw,[11] Gesell, Thompson,[12] and others have studied the effect of nurture upon the child's progress in learning the basic skills. It appears from their findings that special training has little effect upon the maturation of phylogenetic traits, that is, traits the child develops because he belongs to *genus homo*. Observation of identical twins under controlled conditions, in which one twin was stimulated and "trained" and the other twin was not, showed that both twins walked competently at about the same age. On the other hand, ontogenetic traits, culturally patterned behavior, like dancing and roller skating, may be developed through practice. It is nevertheless true that even the appearance of phylogenetic traits may be conditioned environmentally. Nutritional defect, if severe, retards neuromuscular development and thus prevents the baby from gaining postural control. An overprotective mother who restrains her baby from trying out his postural and locomotor skills may retard the child in walking. In the first instance, malnutrition must be construed as an environmental failure to meet the infant's needs; maternal overprotection is symptomatic of the mother's failure to accept her child's status as an independent human being and, in many cases, also of her feelings of guilt because of rejecting the child basically.[13] On the other hand, an emotionally healthy mother "loves her child into walking," just as she helped him learn to breathe and to eat. She has confidence in his ability to grow and she greets his successes with the same enthusiasm, whether his learning is accelerated or retarded or just average.

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[11] Myrtle Byram McGraw, *Growth: A Study of Johnny and Jimmy*.

[12] Helen Thompson, The social and emotional development of preschool children under two types of educational program, *Psychol. Monogr.*, Vol. 56, No. 5, 1944.

The locomotor sequence is anticipated when the newborn child has enough postural control to raise his head from his mother's shoulder. Gradually he gains control of all the muscles of his head, which he can manage quite completely by about the middle of his first year. By the second month, many babies are able to turn from side to back; by the fourth month, these same babies will probably turn from back to side; soon after this, they sit unsupported. Legs are vigorously exercised in the early months. By the middle of the first year, in addition to turning on his stomach, the baby can get around by pulling with his arms and pushing with his legs. A little later, he has strengthened his muscles so that he can raise his trunk from the ground and actually creep, and about one month after this he stands with support. At first he walks with his legs apart and his knees stiff. Gradually he relaxes, and finally comes the easy relaxed stride. The intelligent, emotionally balanced mother acquaints herself with this sequence, observes and encourages the child at each point, but never tries to hurry him on to the next performance. The time between learning to stand alone and taking the first step may sometimes seem interminably long; the mother invites the baby to take this step but does not press him. She believes in his own urge to grow up rather than in any artificial attempts to force growth.

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[13] Cf. David Levy, *Maternal Overprotection.*

Learning to talk is dependent upon a soundly developed vocal apparatus, and this, in turn, depends upon good breathing. With the first true vocalization, it is apparent that the child can now breathe adequately; if he is healthy, he will enjoy exercising the voice which breathing makes possible. He exercises it constantly. In the course of this exercise, some of his sounds impress his parents with their simulation of words, and the selective process that turns them into actual symbols begins. The development of speech will be discussed in detail in a later chapter; here it will be sufficient to indicate that the child needs the interested assistance of the people around him and profits by good speech models and pleasant incentives to talk. Language, in the sense of a specific form of speech, is an ontogenetic performance and therefore dependent upon cultural stimulation. The speed with which new words are acquired varies greatly among individual children, even among children in the same family. How fast the child learns to talk depends in part upon how absorbed he is in gross motor activity; when he is preoccupied with perfecting his motor abilities, he will slow down on vocabulary gains. It must not be forgotten that even the year-and-a-half-old baby operates in a field in which there are conflicting forces playing upon him. The fascination of the newly acquired Taylor Tot competes with the family's fascination with an increasing vocabulary. All factors must be taken into consideration in deciding why Johnnie is taking his time about talking, and any undue insistence, even in the form of failing to give him as much incentive for motor activity as he might like, will probably slow up the process. He will talk, literally, when he is ready, and all the family can do is to contribute to readiness without insisting upon performance. One of the best ways of contributing to readiness is to sing and talk to Johnnie, to interest him in the various sounds in his environment, and to keep good speech models before him.

Learning to control elimination, like acquiring any other form of muscular control, depends in the first place upon maturation and then upon the desire to exercise this control. In discussing the acquisition of bowel control, Gesell and Ilg [14] write:

> Voluntary delay and initiation of the act under variable conditions requires a marked degree of inhibition by the higher centers of the brain. This inhibition cannot be acquired by straight-line progression, by mere habit training, because the control of the bowel involves not only the sphincter muscle, but also the child as a total organism. . . .
> This is the reason that cultural control is so difficult, cultural intervention so often misguided.

In our culture the pressure for cleanliness and control is in sharp conflict with the child's need to master his own process of elimination in his own good time and in his own way. Probably it is still true that, in connection with toilet training, the most severe tensions between baby and adult are created. Some parents impulsively try to train the baby as they themselves were trained, even though they try not to apply harsh methods. There are very basic reasons for this, as psychoanalytic findings have demonstrated. The mother's reaction to the child's elimination is governed all too easily by her "superego." She herself was taught to associate all things "dirty" with shame and disapproval and was forced to adapt to cultural standards sharply in conflict with a baby's need for organic comfort and temporarily keen interest in his organic products. Another strong drive in the situation may be found in the child's discovery that this is a matter in which he may either give way or withhold at will. Paradoxically, it is Freud who says that the child who is hard to train is the "naughty" child for he is deliberately withholding from fulfilling a social demand. When he has the requisite neurological maturity, he *can* control himself, but he frequently *will* not. It is here that the emotionally sound mother can assist her child toward an autonomy that is in accord with cultural standards by manifesting the permissive attitude which builds good will and thus in the end develops the well-trained child. Her emphasis, as Spock [15] indicates, is upon the child's learning (to be able to will) rather than upon her teaching. She relies upon her child's love for her for the outcome, and meanwhile she uses communication rather than threat or punishment. She says, actually, "Do you *want?*" and then indicates the culturally approved method. She gives approval for success, although without too much emphasis, since she does not wish to exaggerate the importance of the act, which, because of all the social pressure connected with its restraint, is too easily emotionalized as it is. She understands that the foundations for generous and cooperative interpersonal relations in later life are laid in early childhood.

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[14] Gesell and Ilg, *op. cit.*, p. 321.

[15] Benjamin Spock, *Pocket Book of Baby and Child Care.*

Stool smearing at this early age does not indicate personality disorganization and the experience will harm the child only if maternal emotion and severe discipline are associated with it. Gesell and Ilg [16] remark:

> It usually originates in a clumsy effort at self-care; it may have the novelty of self-discovery and the stool is naively exploited as though it were that much plasticene; it may even be neatly disposed on the door trimmings with some respect for design.

The psychoanalytically oriented student of children regards stool smearing and other socially unacceptable toilet behavior as characteristic of what Freud called the "anal stage" of emotional development, in which the anus and the surrounding region come to have a high degree of sensitivity and thus to provide strong interest for the child. It is apparent from the description of the neonate given earlier and from ordinary observation of very little babies that, at the beginning of life, the oral region—the lips, the mouth, and surrounding area—constitutes the most sensitive zone. For this reason, not only the taking of nourishment in itself, but also the pleasurable act of sucking, is most important for the infant's development. It may be said that his pleasurable feeling at this period is organized around the mouth. As he grows, sucking and other oral pleasures decline in their importance. Correspondingly the act of elimination arouses interest and assumes importance. From this point of view, the second stage of emotional growth is marked by an organization of pleasurable feeling around the anus.[17] Most observers of little children agree that, regardless of whether or not the Freudian theory be adduced in explanation, nursery tots are interested in the processes and products of elimination. It is in connection with this interest that shaming is so often introduced into child training, a method which reflects the disgust and fear associated in the minds of far too many adults with the natural processes of the human body.

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[16] Gesell and Ilg, *op. cit.*, p. 326.

Emotionally mature parents, who have either escaped the unhealthy prejudices of the majority of adults or, through self-analysis, have been able to understand and discard them, are able to avoid the introduction of unhealthy attitudes in their training of their children. Again it is a question of being fully accepting and permissive, even while encouraging the child in the development of culturally acceptable patterns. For such encouragement, communication based on complete understanding is essential, the child through syllable or gesture or formal speech communicating his needs to the parent, who, in turn, offers socially approved means of meeting these needs. Moral sanctions should never be invoked, nor feelings of shame associated with the workings of nature.

The goal, it will be recalled, for the child who is growing out of early, helpless infancy is autonomy unspoiled by feelings of failure and guilt.

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[17] For a convenient account of Freud's theory of child development, see Ilse Forest, The libido concept, *Amer. J. Orthopsychiat.*, Vol. 17, No. 24, October, 1947.

CHAPTER IV

Early Childhood

> To some extent self-activity and sociality are opposing tendencies. Nature through maturation and Culture through guidance bring these tendencies into balance and proportion.
>
> ARNOLD GESELL and FRANCES ILG[1]

SELF-ACTIVITY VERSUS SOCIALITY

The growing independence of two years old or thereabouts alters the child's interpersonal relationships in certain important ways. While he still needs his mother very much for both his physical well-being and his emotional security, the aims of the two individuals are mutual to a lesser degree than formerly. Parents naturally incline toward expecting a little more active cooperation from this older baby than they did from an infant, and the child, meanwhile, ranges about in pursuit of his own expanding interests. The purposeful exploration of the environment includes dressing tables, bookshelves, desks, and china closets. Growing enthusiasm for romping and exploring dims the interest in routines. The physical care of a healthy "two" is quite exhausting, for his power to get into trouble is considerable, and his skill in getting out of it, practically zero. The baby's rapidly growing locomotor ability expands his field of operations, or what Lewin calls his "life space," [2] to a point at which conflicting needs and wishes complicate the psychological picture, both for him and for his family. The matter calls for a maximum of gentleness and affectionate understanding and a minimum of firm, consistent guidance. The child must not be thwarted needlessly in his self-activity, else his autonomy and developing initiative are threatened and feelings of inadequacy or hostility hinder his joyful progress toward independence. On the other hand, guidance must gradually help accustom the youngster to socially acceptable behavior; sociality, which is as vital to his happiness as is wide latitude for self-activity, requires increasing conformity to the needs and wishes of others.

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[1] Arnold Gesell and Frances Ilg, *Infant and Child in the Culture of Today*, p. 347.

The Laws of Growth

Successful child guidance, in the last analysis, depends upon a right feeling for children on the part of those responsible for their care. The intellectual grasp of psychological theory, in fact, the possession of all conceivable information about child development, is of little avail when this right feeling is absent. Yet some understanding of the laws which govern the maturation of behavior helps in maintaining an attitude of acceptance in dealing with the very young. For instance, the two-and-a-half-year-old is beginning to run quite expertly, even to the extent of turning corners if he does not come upon them too suddenly. At the same time, his nervous system is not well enough organized, in general, to make it possible for him to respond instantly to a command or a request. If Junior is headed toward the ink bottle he won't, and in all probability he can't, respond immediately to Father's order to leave the ink alone. The safer way for all concerned is for Father to get there first and remove the ink from Junior's reach, waiting upon further maturation before expecting the child to respond quickly and effectively to verbal directions. Removing the hazard sets a realistic limit to investigation; substituting another attraction, like a red and blue marking pencil or a favorite toy, protects the explorer from undue frustration.

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[2] See Kurt Lewin, "Behavior and Development As a Function of the Total Situation," in Leonard Carmichael (ed.), *Manual of Child Psychology*, pp. 791–844.

"The child," writes Gesell, "always reacts as an integer." [3] It is convenient for study purposes to consider behavior in its different aspects. Using Gesell's terms, these aspects may be called "motor," "adaptive," "language," and "personal-social." These four major fields of activity "comprise most of the visible patterns of child development. They do not, of course, fall neatly into compartments." [4]

Motor characteristics, which include posture, locomotion, prehension, general body coordination, and specific motor skills, begin to develop in the early weeks of the child's life in the uterus. This development goes on continuously through the prenatal period and during the early years of childhood.

Adaptive behavior, that is, perceiving, manual behavior, talking, and directing movement in an oriented, purposeful fashion, thus experiencing and learning to profit by experience, is rudimentary during early infancy. It is fascinating to watch the rapid development of adaptive behavior in a healthy baby during the latter part of his first year; and by the time he is two and a half he is quite efficient as an investigator of the environment, provided he has met with suitable encouragement. "No!" "Stop that!" "Don't touch!" are not only annoying and frustrating, but they actually prevent the growing child from learning at the very beginning of his education when he is "all set" to learn and eager to educate himself.

Language is not limited to spoken words but includes "all behavior which has to do with soliloquy, dramatic expression, communication, and comprehension." [5] We have learned that language appears with the birth cry. In its early development, it depends upon the development of breathing and the adequacy of the organs involved in the production of sound. Once the parents have selected certain sounds for special approval, learning to speak is a circular process, with the baby "sounding off" and the parents repeating the sound and giving the child continued encouragement and assistance in associating sounds with activities and objects. But the youngster does not wait for the tedious process of vocabulary building in order to *communicate* his needs and wishes. First he cries in different keys and in differing tempo to announce that he is hungry or wet or wanting company or simply angry. Shortly he uses syllables in command or question or annoyance to indicate his wishes. "Da!" acquires several meanings, to be determined according to the tone. Finally comes the recognizable word, of which many children can use several at a year, although very many do not. During the second year, when the baby's main interest is centered on getting around, his increase in language ability is often slow and slight. He is occupied with other things. During his third year, he usually acquires quite a vocabulary and becomes expert in using simple sentences. By the time he is four, his command of language is extensive, in some cases astonishingly so. "You needn't bother to buy me expensive lamb chops, Mother. I won't eat them anyway," announced Sally at three and a half. "What's the matter with the thing?" asked a mother of the garage man who was working over her car. "That's a carburetor," said Johnny, not quite four, in a tone of patient boredom. Three years ago his "vocabulary" consisted of "ma-ma" and "da-da" and a few other sound combinations.

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[3] Arnold Gesell, "The Ontogenesis of Infant Behavior," in Carmichael (ed.), *op. cit.*, p. 299.

[4] *Ibid.*

[5] *Ibid.*, p. 268.

Personal-social behavior, or the growing child's level of adjustment to other people, is, of course, evident in connection with the other aspects of behavior just discussed. The child who is secure and independent to the extent of wanting to help himself will practice motor skills successfully, surpassing in his performance that of the child who is insecure and fearful or demanding of help because he needs constant attention from adults in order to feel that he is accepted. A child who has developed basic trust in the people around him, from whom he has learned to expect approval, encouragement, and help when needed, will use initiative in exploring his environment and make strides in the process of self-education. On the other hand, a child who does not trust his social world lacks confidence in his ability to master the other areas of his environmental field. In the same manner, the development and use of language are easily affected by the quality of the child's interpersonal relations, by whether he wants to communicate because he is helped and encouraged in his efforts or whether he perhaps fails to speak for lack of encouragement or the right sort of incentive.

Gesell holds that growth follows an orderly sequence in each of these areas of development: motor, adaptive, language, and personal-social, even while he insists on their interdependence and on the integral character of behavior. While the rate of development differs with each individual, the sequence follows the general laws of neurological growth and is the same for all. The direction of neurological maturation is cephalocaudal, that is, from head to "tail"; growth also proceeds from the center of the body to the periphery, that is, in a proximodistal path. "Lips and tongue lead, eye muscles follow, then neck, shoulders, arms, hands, fingers, trunk, legs, feet." [6] Every child must be able to raise his head before he can manage his shoulders or his trunk, and achieve independent sitting before he can stand or walk. Mary may accomplish the sequence leading from raising the head and culminating in taking independent steps in ten months; Jim may need a year or more. Vocalizing precedes speech, although one child converses quite freely at twenty-four months, while her brother is not really fluent until he is a year older. While the sequential character of growth is less clearly demonstrated in the complex forms of adaptive and personal social behavior, Gesell thinks that in these areas too all children progress through approximately the same stages.

THE "GROWTH COMPLEX"

The maturation of the human organism cannot proceed in a simple straight-line fashion, for the task of behaving like a human being is infinitely complex. Even motor development, which begins practically with the life of the individual, requires complex adjustments. The random thrashing about characteristic of the newborn baby must give way to coordinated movement. Arms and legs must work together on block building or painting, in walking, dancing, or swimming. Not only must the limbs work rhythmically together, but each individual limb must also "learn" to inhibit one set of muscles while the opposing muscles are in action. This complicated organization is not achieved through a simple process of accretion but rather through progressive *reorganizations* of the whole neuromuscular system in order to accommodate the whole behavior complex to every new item of behavior growth.

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[6] *Ibid.*, p. 299.

Once more an illustration of this may be taken from the child's progress in the control of elimination. We have seen that the sphincters governing retention and release must be brought under cortical control before the child is able to respond satisfactorily and that, furthermore, they must work reciprocally; they must also work as a part of a whole field of behavior. The paramount importance of getting the child's good will while building his autonomy was also emphasized. However, long after the ability and the will to conform to the parent's wishes have been established, as the child busies himself with the achievement of new skills and his general field of exploration widens, the training may vanish. The delicate balance of the opposing sphincters is upset and remains so pending the reorganization of the whole field of motor development to the newly acquired skills. Since the excretory processes are controlled by cultural requirements as well as by balanced voluntary and involuntary mechanisms, it is evident that language, adaptive behavior, and personal-social growth, as well as motor development, are involved in the establishment of routines. As the whole behavior complex develops, the various areas of growth reinforce each other in perfecting the child's management of his behavior. Unfortunately, when lapses due to progressive reorganization occur in the third year or even earlier, parents who are not wholly accepting of the small child's characteristics actually prevent this reinforcement by shaming, punishment, or other methods inimical to the development of autonomy. On the other hand, when the child is fully accepted and the characteristic fluctuations in behavior growth are understood, he will pick himself up, so to speak, from his "lapse" and presently show better control over all of his behavior than before his regression. Rightly understood, the child's lapses are seen to be indicative of the spiral character of the complicated growth process. In Gesell's words,[7]

> The organism at times seems to retreat from a locus of maturity which it had already attained. Temporarily such a retreat may look like an abandonment. It would be an abandonment if it continued on one tangent. The course of development, however, being spiral, turns back toward the point of departure; and it does not return precisely to this point. It returns to the same region but at a higher level. The neurological result is an *interwoven texture* which expresses itself in progressive patterns of behavior. The unity of the ground plan of the organism is preserved. It is a process of reincorporation and consolidation, rather than one of hierarchical stratification.

On the basis of his researches, Gesell concludes that not only the behavior forms common to the race but also individual characteristics and peculiarities are determined by inherited "regulators." The weight of the evidence accumulated through the Yale studies appears to their director to point in the direction of individual differences as present *at birth* rather than existing because of postnatal influences.

> Long range studies made in our clinic have demonstrated that such traits as social responsiveness, readiness of smiling, self-dependence, and motor agility tend to manifest themselves early and to persist under varying environmental conditions. Every child is born with a *naturel* which colors and structures his experiences. The infant, to be sure, has great plasticity, great powers of learning, but there are lawful limits to his conditionability. He has constitutional traits and tendencies, largely inborn, which determine *how, what,* and to some extent, *when* he will learn.[8]

As a corollary of the conclusion that individual characteristics are intrinsically determined and, therefore, exist at birth, Gesell holds that behavior studies of young infants have prognostic value, that observations made in the first year of life indicate the rate at which the child may be expected to progress during succeeding years of growth. Individual mental growth curves, to express this conclusion in another way, tend to be constant. In this position, also, Gesell is at variance with the majority of investigators, although he admits the possibility of variations in an individual's growth curve during periods of severe stress due to environmental causes. "When the organism is under stress of distortion because of unfavorable conditions, its ultimate adjustments as expressed in growth characteristics become less predictable." [9]

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[7] *Ibid.*, p. 317. Italics inserted.

[8] Gesell and Ilg, *op. cit.*, p. 40.

THE SOCIOBIOLOGICAL APPROACH TO BEHAVIOR STUDY

The laws of development formulated by Gesell as a result of the long-range studies conducted at Yale have a somewhat different significance when they are complemented by the insights of the sociologically oriented student of child behavior. The great and lasting contribution of the Yale studies is toward an understanding of the neurological structures that are the bases of behavior; Lewin and his collaborators as well as Erikson and other psychoanalytically oriented students of human development are primarily concerned with its dynamics. The behavior of the child of two or three expresses the relative immaturity of his nervous structure; but this behavior is likewise powerfully affected by the social milieu, by the way in which he and his family relate to each other as he learns to adapt himself to cultural requirements while pursuing his own strong interests.

EMOTIONAL GROWTH IN EARLY CHILDHOOD

The groundwork of the adult personality is laid in early childhood. This assertion is often challenged, even by psychologists who have not given too much thought to young children; yet, the statement becomes reasonable when the depth and intense quality of early emotional experiences are appreciated. The small child depends for his security upon his family's love, especially the love of his father and mother. The sense of aloneness characteristic of the young infant easily overwhelms the older child when events jeopardize his security because loss of love is threatened. A three-year-old who has mistakenly climbed from the couch to the leaf of a tip-top table wreaks havoc, perhaps hurts himself, and perhaps cannot pick himself up. It is important that the adult who rescues him consider the child's feelings rather than the property damage which has to be repaired. A frown indicating rejection, no matter how slight and passing, is a threat to the youngster's vulnerable sense of security, especially if it appears on the face of a parent. One of the most serene, urbane, and tolerant of the author's friends, an academic gentleman in his middle fifties, once remarked to a small group that he had recently broken a glass and had been amazed to note that he reacted by a sort of hostile retrospect: "I was suddenly glad that I did not need to be afraid that a parent would come and scold or punish me!"

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[9] Gesell, *op. cit.*, p. 327.

Freud described the early relationships of the child with his parents in terms of what he called the "Oedipus complex," giving emphasis to the suggestion that "infantile sexuality" is expressed in a strong attachment to the parent of the opposite sex and a corresponding jealousy and hostility toward the parent of the same sex. However, Freud also stressed the well-known observation that children usually want to be like the parent of the same sex: the little boy would be "a big man like Daddy"; the little girl identifies with her mother and imitates her mother's activities as she plays with her dolls or "helps" with the housework. This ambivalence creates a more or less severe conflict, accompanied by painful guilt feelings; the parent of whom the child is violently jealous is also the parent the child loves and wants to emulate. One minute he actually shouts at his father, "I hate you! I wish you were dead!" (or, if he is afraid to shout aloud, he shouts inwardly). The next minute he is overwhelmed with guilt and with fear that his wish might come true, for, after all, his father is good, he is the child's protector. Perhaps he will even verbalize, "I didn't mean it!" but there is reason to think that for the moment his hostility was both deadly and real.

The very young child's need for love is boundless and intensely demanding; even an infant will show distress if his parents express affection for one another without including him. The most severe threat to the child's happiness is experienced with the advent of a new baby; there would seem to be no solution that is entirely adequate to the problem of sibling rivalry and jealousy. Probably, some of these painful and hostile feelings have to be lived through by all except only children, and only children, too, have their special emotional problems. Children express their jealousy in many ways, ranging from physical attack upon the new baby to quite complete social withdrawal. One investigator,[10] who studied 39 jealous and 31 nonjealous children, found among the 39 jealous ones 26 cases of direct attack on the new baby, 2 cases of ignoring the child's presence, 2 cases of denying having a new sibling, and 9 cases of personality changes with no noticeable overt reactions toward the infant.

A little boy observed by the present writer showed variations of ignoring his new sister's presence and denying her existence, beginning during his mother's pregnancy. It has been shown by at least one investigator [11] that a decrease in direct concern for the older child is apparent during pregnancy and after delivery in the average mother; the new demands upon her make it all but impossible to continue to fill the older child's need for constant love and attention. In Harold's case this factor was at a definite minimum; in fact, it never was manifest to the present narrator. The mother's rapport with her four-year-old son was apparently unique. Yet she could not interest him in the arrival of a new baby brother or sister; he would listen politely when she explained that one was coming, offering no comment, and raising a completely different question by way of changing the subject. Even when a bassinet, borrowed from a relative so that nothing of Harold's would be used for the new baby, was delivered at the house his response was a distinct "No comment." When he was asked about the coming of a baby, he knew nothing about it. Finally, three weeks before the baby came, he said to his mother, "When that new baby comes, couldn't it sleep somewhere else and just live here in the daytime?" When gently told that this arrangement wouldn't work, there was no further discussion. At about the same time, riding home in the writer's car, he suddenly announced, "You know what? When I get home I am going to find a sister." No further comment was made on either side except by the adult, "Won't that be fun!" When the baby finally arrived, her brother ignored her completely except for occasional attempts to discredit her. "Mother," he reported while his mother was entertaining some guests, "that person is screaming again." A hurried trip to the sun porch revealed a peacefully sleeping infant.

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[10] Mabel Sewall, Two studies in sibling rivalry: I. Some causes of jealousy in young children, *Smith Coll. Stud. Soc. Work*, 1930, pp. 6–22.

[11] Alfred L. Baldwin, Changes in parental behaviour during pregnancy, *Child Develpm.*, Vol. 18, 1947, pp. 29–39.

Jealous children frequently regress to infantile behavior patterns, soiling themselves or refusing to eat or, in some severe cases, regressing in their language behavior to a point at which "mental retardation" is suggested to the alarmed parents. Some children tend to vent their hostility and fear and general hurt on their playmates; in other cases the unfortunate behavior patterns developed in the context of childhood jealousy persist into adult life.

Meanwhile the healthy child of three or thereabouts is beginning to expand his range of social contact beyond the immediate family, this family in which he finds his security and in the context of which he also experiences more or less severe emotional shocks. He becomes interested in his peers. First he plays beside them on the street or in the park or in nursery school. Then he begins to join them, to include them in his play. Often, as was noted, they bear the brunt of his home jealousies; the aggressions which he dares not express toward his siblings are expressed toward them. At the same time, the growing recognition of the peer group, increasing success in participating in group activities, the experience now and again of leadership, are strengthening his ego so that he is increasingly able to bear up under the emotional stress of growing more mature and finding himself as a person. He becomes, if all goes well, increasingly independent, therefore less vulnerable to the threat involved in being obliged to share his parents' love.

Guiding the Emotional Growth of the Young Child

The response of adults to the child's expressions of emotion is of crucial importance to his wholesome growth. These expressions are often trying to his family, but it is imperative that the needs of the child rather than the inconveniences of his emotional outbursts be given prime consideration. Sherman,[12] whose criticisms of John B. Watson's theory of emotional development were mentioned in an earlier chapter, concluded that emotional behavior in the young infant is limited to simple feelings of "pleasant" and "unpleasant" and to corresponding positive-approach responses to what is pleasing and negative-withdrawal from unpleasant stimuli. K. M. Banham Bridges,[13] after three years of study of emotional behavior in nursery school children, concluded that emotional expression begins in infancy with an undifferentiated emotion of *excitement*. The baby gives evidence of his excitement by uncoordinated skeletal and visceral reactions in response to any adequate stimulus, internal or external. Gradually some of these visceral reactions become differentiated from the rest, conditioned to various stimuli, and combined with certain skeletal reactions in such a fashion that the patterns of the various well-known emotions may be distinguished. According to Bridges, the first two emotions to become patterned and dissociated from general excitement are delight and distress. From delight there gradually emerge the patterns of elation and affection and, finally, at twenty-four months, of joy. Distress becomes differentiated into fear, disgust, and anger. By five years of age, Bridges [14] speculates, shame, anxiety, disappointment, and envy have evolved from the primary stem of distress; hope and filial affection, from the primary stem of delight. From Bridges' empirical data it therefore appears that maturation and learning, in the sense of conditioning, result in the gradual development of recognizable patterns in emotional expression.

It is helpful to recognize this evolution of patterned emotional behavior, but it is crucial for the child's adjustment that the people caring for him understand what a particular bit of emotional behavior—for example, angry aggression against a sibling or a playmate—means in his particular developmental history. John is always in trouble in his four-year-old nursery school group because he hits and bites and generally hurts his playmates. The psychologically oriented teacher sees in this fact not a situation calling for punishment but an indication that John is hurt and frightened and hostile, therefore in need of help. He needs reassurance that he is loved, that no one blames him for being angry, even though drastic limits must be set to aggression against other people. He may not abuse his playmates; however, he may beat up a doll or hammer a peg viciously by way of giving vent to his destructive feelings.

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[12] Mandel Sherman, The differentiation of emotional responses in infants, *J. Comp. Psychol.*, Vol. 7, 1927, pp. 335–351, 385–394.

[13] K. M. Banham Bridges, A genetic theory of the emotions, *J. Genet. Psychol.*, Vol. 37, 1937, pp. 514–527.

[14] K. M. Banham Bridges, Emotional development in early infancy, *Child Develpm.*, Vol. 3, pp. 324–341.

Mary is a trial to her family because of her temper tantrums. When Mary screams and bangs her head up and down on the floor, it is Mary who needs help rather than her "long-suffering" family. As she receives this help, she too must be reassured that she is loved, that her family is "all for her" in spite of her noisy nuisance value, and helped to see that everybody gets mad, although big children have to learn not to give vent to uncontrolled behavior. Isolation, while a relief to the family, is definitely bad for Mary if it is prolonged. Mary needs inclusion in the warmth of real affection rather than physical isolation, which she easily mistakes for rejection.

Susan is fearful. She doesn't want to be left alone without a light when she goes to bed; she gets up in the night and goes to her parents' room; she cries in terror during thunderstorms. This four-year-old cannot be relieved of her fears by being laughed at or sternly told to stay in her bed or admonished to stop crying because the neighbors will think she is a baby. A badly frightened child regresses to infantile forms of emotional behavior; her need is for comfort and reassurance, a building up of trust rather than discipline aimed at teaching her to act her age. On the other hand, Susan's parents need not "feel guilty" because their child has developed fears. Fears grow easily in the baby; it would be a very wise parent, indeed, who could always plan and guide so that no fears appeared in his children's behavior. What is needed is support for Susan, understanding when she slips into blind panic, liberal recognition for increasingly courageous behavior.

The job of the adult is not to protect the child from all fear but rather to help him cope with fear-producing situations. The three-year-old has learned that injections are painful and shows anxiety or worse when confronted by a trip to the doctor's office. This is true even when pediatricians take every precaution to avoid giving unnecessary pain or discomfort. This is a part of life for the young modern and the task is to build him up so that doctors and nurses and dentists working in his interest can be met with courage and cooperation. He will need help in enduring these things: admiration, praise, the comfort of something "extra nice," such as ice cream or a trip to the zoo following the experience as a matter of course, *regardless of the child's behavior,* help the morale very much. On the other hand, bribes, "If you will, then—" or deceit, "The needle won't hurt you," wreck the confidence of the most courageous youngster.

Growth of the Mind in Early Childhood

Mental growth, which Gesell holds to be determined as to rate and potentiality by innate, intrinsic factors, seems to most contemporary students of child development to be vitally affected by environment and experience. The healthy child, placed in an interesting environment and guided by loving adults, grows rapidly in accuracy and range of perception, in the formation of accurate and serviceable concepts, and in the ability to reason. An environment providing for a wide range of free exploration under conditions of reasonable safety invites investigation, and each new quest opens up wider horizons. Adults who understand and share the child's experiences, who take time out to converse and listen and explain when invited to do so, who are ready to look at pictures or to read stories, stimulate and encourage learning and help the child to interpret and organize all that is happening to him. It is submitted that normal, healthy children respond to these circumstances and that it is exciting to watch their growth in wisdom and intellectual stature during their preschool years, even though all of them will not prove to be in the genius group when they reach adolescence. It is also believed that the same vigorous young human beings, deprived of incentive, encouragement, and opportunity to discover and learn, will be relatively immature at school entrance, no matter what their capacity for learning may ultimately prove to be.

PLAY

Play, or activity without any extrinsic purpose, involving the whole organism, "body, mind, and spirit," is the normal pursuit of the healthy young child during his waking hours. Play is the child's way of learning as he grows, exploring and testing his environment, relating himself to people, and thus learning how it feels to participate in the life activities of the world of persons of which he is becoming an active member. It is inseparable from learning in the earlier years of development. In infancy, play is concerned with physical activity; it is expressive of the joy and satisfaction accompanying sensorimotor experience and learning. Later, imagination and imitation enter in. With the development of language, play becomes more complex and the use of play materials more varied and dramatic. In the third or fourth year, play becomes social; it involves other children and is accompanied by rudimentary planning. In carrying out play purposes, the child will pull and tug and build and "work" to the point of physical exhaustion; yet, work is not really present, because the exhausting activity is itself "the thing." There is definite organization in the rich play of fours and fives; "role playing" is significant and sometimes remarkably constant. Records have been made by Murphy [15] and others which reveal a sort of play "gang" organization in the activities of some early childhood groups, gangs in which leaders and henchmen assume and retain their respective roles over periods of a year or more.

Emotional release through play activities due to a sense of competence and mastery may be observed in normal groups of little children, as well as in groups organized for therapeutic purposes. A group of little children, some of them manifesting severe problems and others in the healthily normal category, were playing in the nursery school yard one day early in World War II. There was tension in the whole atmosphere that day, since a false alarm of an imminent air attack had been sounded earlier. A small boy stepped on a beetle, crushing the creature with vicious intent. "Oh," said a horrified young volunteer worker, "don't step on the poor beetle!" The remark, literally post mortem, was overheard by a neighbor's child playing on the nursery fence. "That's a Japanese beetle," he offered helpfully, "and there's lots more of them over in the bushes." The effect was instantaneous; 20 three- and four-year-olds raced to the bushes and assaulted the beetles they found, every last one. "Slap the Japs!" "Kill the beetles!" "No, kill the *Japs!*" was shouted on all sides. Bedlam reigned. Soon it was time to come in for the late afternoon snack before going home. The director expected continued fireworks indoors. But no. The children were relaxed, smiling, and happy. The tension noticed earlier in the day was gone. They were relieved of their anxiety; in their play they had "done something about it."

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[15] G. Murphy, L. B. Murphy, and T. M. Newcomb, *Experimental Social Psychology*, rev. ed.

THE DEVELOPMENTAL TASK OF THE EARLY CHILDHOOD YEARS

The developmental objective in the early childhood years is the achievement of initiative in the face of threatening and disappointing circumstances and the triumph over the guilt feelings caused by infantile aggressive behavior, both implicit and overt. The task must be carried through by the child himself, but he can be greatly helped or drastically hindered by the right or wrong sort of parental guidance. Some parents play upon the guilt feelings which follow the child's naughty behavior, either by the "crocodile-tear method," "You hurt poor Mommie. Now be a *good* boy and Mommie will feel better," or by adding punishment to the hurt and confusion of guilt. Others, who really love and understand their children, press the point that the *child* is never naughty, therefore always secure in his parents' love. The child's behavior may be dangerous and destructive and therefore subject to firm prohibition and punishment where necessary, but the child himself is good, and he and his parents are working toward a common goal, his wholesome growing up.

The child who has investigated freely and widely in his preschool years, who has known a maximum of freedom, whose parents have identified with him and helped him achieve his purposes and thus gradually reduced infantile hostility and guilt, comes to school ready, willing, and eager to learn what the school is prepared to teach.

CHAPTER V

Growth Levels at School Entrance

> If it were true . . . that the personality is set during the very early years of life, the school would be powerless in relation to it. But whereas there is much evidence to the effect that the very early years are of major importance, there is also evidence that crucial phases of development occur during the years that follow.[1]

The Latency Period

The school entrant whose needs have been met adequately during his nursery years is eager for new experiences and therefore genuinely anxious to learn. When, so far, all has been well with him, he will have outgrown his babyhood with its uncontrolled, all-or-none emotional behavior and its extreme egocentricity; he will have achieved enough stability and interest in others to relate well to his peers and to his teachers in the joint enterprise of teaching and learning. In Freud's terms, the turbulent period of the Oedipus complex is over; incestuous wishes and resulting guilt feelings have been sublimated, and the young school child enters a "latency" period in which the energy formerly expressed in infantile sexuality becomes available for intellectual, rather than erotic, pursuits. Otherwise stated, the child is now sufficiently secure in his basic relationships with people, sufficiently confident of his own integrity as a person, to widen his field of explorations, physical and social, and to devote his energy to mastering new techniques of expression and communication. His initial adjustments to the school situation are most important for his continued well-being. To quote the digest of the Fact Finding Committee of the Midcentury White House Conference once more: "At about the beginning of his school life the child either develops a sense of competence to bring defined tests to completion or falls into a prevailing mood of incompetence and inferiority in relation to what confronts him." [2]

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[1] *A Healthy Personality for Every Child,* Midcentury White House Conference on Children and Youth, p. 108.

It is therefore imperative that teachers of the early school grades be skillful in assessing the needs and competencies of their young pupils. Some of these needs and competencies are common to the majority of healthy school entrants; others will be individual in character, the outcome of the preschool experiences, the various successes and failures in the task of development in the early lives of particular children. In the following pages an effort will be made to summarize some of the facts about the majority of young school entrants that should be of major concern to their teachers and, at the same time, to show in what important ways individual children may differ widely from the majority.

PHYSICAL DEVELOPMENT

The bodily proportions of a six-year-old approximate more nearly those of the adult than those of the newborn child (see Fig. 1, Chap. VI). He is better than twice as tall as he was at birth and between five and six times as heavy; his body surface area is three times as great as it was when he was born. His body and limbs have grown so much more rapidly than has his head that he is no longer "top-heavy"; his head is now only about one-eighth as long as his whole body. From the time he was two, his head has also grown very little in width; in fact, one investigator reports that the width of the head hardly increases at all after the child is three.

There are some interesting differences in growth trends as between boys and girls during infancy and early childhood. Girl babies are, on the whole, more mature and stronger than boy babies; the girls' mortality rate is lower during the neonatal period than that of the boys. On the third day after birth the mortality ratio of males to females reaches a peak of from 1.45 to 1.50. There are some fluctuations in this index during the first two months of postnatal life, after which it decreases steadily until unity is reached at the age of four. However, although girls are more advanced than boys in their physiological maturity, composite anthropometric measurements taken at the University of Iowa and other research centers show that they are consistently smaller in stature until the age of about ten.

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[2] *Ibid.*

The young school child is entering upon a developmental period in which growth will proceed much more slowly than was the case during the preschool years. The organism settles down, as it were, to the task of perfecting specific areas and functions rather than achieving spectacular gains in growth as a whole. At school entrance, the child's larger muscles are better developed than his smaller muscles. His eyes are not yet fully mature, and he has a tendency to be farsighted. His eye-hand coordination is not as sure as it will be in a year or two. His heart is growing rapidly. His first permanent teeth, the six-year molars, are beginning to erupt. All of these facts about growth are significant for the teacher, whose special task it is to help the child develop the skills and understandings which he needs for wholesome self-realization and acceptance by the society in which he is growing up.

MENTAL DEVELOPMENT

The child's mental maturity at school entrance is the resultant of his "alertness" to his experiences, past and present, and the range and quality of experiences with which his environment, past and present, provides him. Competent authorities are not wholly in agreement as to how far alertness is an inherited factor and how far it is dependent upon early nurture; certainly, at the present stage of our understanding of human growth, full weight is given to the importance of nurture and to the important bearing of social and emotional factors upon the child's manner of responding to intellectual challenges. The wide variation in the preschool experiences of young school children is also recognized, and the well-trained teacher in a modern school plans carefully to reduce resulting inequalities in mental maturity by a rich "experience curriculum." Such a curriculum includes all manner of interesting group and individual projects, excursions, experiments, and a variety of other audio-visual aids.

Sensory acuity is quite well developed in the majority of primary-grade pupils; they are able to perceive fairly accurately, to form concepts, to reason. It is probably correct to say that children are capable of abstract thinking at some level at every age. The seven-month-old child who has a toy in each hand and is offered a third toy is confronted with a problem; if he drops one of the toys he is holding or shoves it aside and accepts the proffered one, he solves his problem and shows his capacity for abstract thinking at his early level of development. The five-year-old, attentively observing the world around him, questioning his parents for endless explanations, gives clear evidence of having formed so abstract a concept as causality:

"Where did the duck come from, Mother?"

"From the egg. You know that."

"And the egg came from a duck and the duck came from an egg. Where did the first *egg* come from?"

Yet the same child will accept as matters of fact accounts of fantastic creatures and occurrences, for, although he has all the necessary equipment for sound reasoning, his limited experience leaves him without bases for reliable judgment. Unless he has seen many ducks and observed their habits at first hand, he will accept the tale about a bright green duck who laid golden eggs without incredulity. All things are possible to a lively, healthy imagination unchecked by many encounters with reality. The provision of manifold meaningful experiences, therefore, becomes a major concern of the educator.

By the age of six, the average child can recognize about 24,000 words, which represent a tenth to a fifth of all the words he will ever know.[3] If encouraged, he can express himself clearly with a spontaneity that is all too easily lost in the process of learning correct form. He can keep a sequence of ideas in mind, and tell a story or report an event with clarity and accuracy, although he will probably need help on the latter score. He marshals his thoughts and begins to offer more or less cogent reasons in support of an opinion. He enjoys watching experiments, such as, for instance, one planned to demonstrate that "fire needs air to burn." He will produce a sound hypothesis as to what will happen if certain conditions are present, foretelling that the candle covered by the big globe will burn longer than the candle covered by the little one, "because there is more air in the big one."

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[3] Mary K. Smith, Measurement of the size of general English vocabulary through the elementary grades and high school, *Genet. Psychol. Monogr.*, Vol. 24, 1941, pp. 311–345.

The six-year-old is interested in the world around him. He wants to know about it; he will attend diligently just so long as this desire is being fulfilled. He will work at learning anything he wants to know and he regards most things as being his business. It is the task of the teacher to channel this interest and energy so that he will master the forms and skills which his culture demands of him.

Emotional Development and Social Behavior

The treatment of the various aspects of behavior under the separate categories of physical, intellectual, emotional, and social becomes necessary for clarity when the complex behavior patterns emerging during the school years are under discussion. However, such categorizing is at best artificial and may be misleading. The awkwardness of so dividing total behavior is particularly apparent when emotional and social development are the subjects of consideration, because these aspects of behavior are so completely interwoven and intertwined. As a matter of fact, emotional experiences are essentially social processes, and they further involve the whole organism in certain definite and definable ways.

Take for example the experiences of Bill, a five-and-a-half-year-old school entrant. Bill has completed two years in nursery school and a year in kindergarten. He knows how to cooperate rather well with his peers on group games and projects; acceptance by his peers is important to him and he is well accepted. Recently Bill and his classmates have begun to enjoy games in which the individual player pits his skill or endurance against another's. Bill is a jubilant winner, but he is only just beginning to be a gracious loser, and, unfortunately, his teacher, Miss M., hasn't helped him very much up to the present time. Miss M. admires a "good sport"; she has tried to explain sportsmanship to Bill and has shown disapproval of his behavior as a loser. This is not because Bill's reactions are any more unsportsmanlike than most of the other children's, but rather a reflection of Miss M.'s just evaluation of Bill's generally superior social behavior. Why can't he be a good sport in addition to being helpful, industrious, cheerful, and a leader in the group?

Miss M., it would seem, has lost sight of the fact that Bill is behaving quite normally as an average, wholesome little boy. Rather than expressing disapproval of his present behavior, it would be well for her to consider this child's basic trust in his environment, his sense of autonomy, his initiative, and the way in which his degree of attainment in these fundamental matters is expressed in his feelings toward himself, toward others, and toward the things that happen to him as he goes forward in his testing of the world in which he lives. From the time of his first entrance into nursery school, Bill has adjusted well to being away from his family for a few hours; he has also shown pleasure at returning home. Bill trusts his parents; he is not afraid to leave them to have fun with other boys and girls. Bill has also developed good self-direction. His parents have encouraged autonomy in their little boy, and Bill takes competent command of his own affairs. He has initiative; he works well. However, Bill is only five and a half; he will tell you he is "going on six," and this very remark is significant. Bill *wants* to be six because being six means being bigger and more competent than he is now. An important and reassuring fact about Bill's development is that he wants to stand well in his peer group; he enjoys prestige and wants to retain it. He is getting on to the important goal of real self-acceptance, but he has not yet reached this goal, and losing in a game, therefore, becomes a threat to his as yet imperfectly grounded self-esteem. When he wins, he is jubilant. (Students of child development should recognize jubilance and other positive feelings as just as truly an index of emotional maturity as are the more dramatic and publicized feelings of fear, rejection, or hostility.) When Bill loses, however, he experiences insecurity, threat, and he reacts by showing hostility toward the winner and/or the whole social situation, including Miss M. and her nagging about being a sport. It is far better for Bill, as a wholesome, average five-and-a-half, to vent his feelings of hostility by kicking things around and telling people how he feels about them than it would be for him to cloak this hostility and let it pile up "inside," meanwhile making pretty speeches and being praised as a good sport.

Bill's feelings about being a loser and the social behavior resulting from them are a direct index of his basic adjustments, a measure of his self-acceptance and his progress in his testing of reality in a group new to him, the first grade. Bill needs help in the form of reassurance from his teacher that he is doing well, "making the grade," in numerous, plainly recognizable ways. He also needs encouragement to go on testing himself and his group. He will be ready to comprehend the meaning of a good sport and to accept sportsmanship as a goal when he and his group together have reached a level of maturity at which they are ready to discuss and analyze this abstraction on the basis of their own experiences.

Honest, overt expression of feelings is of great importance to the child. The average school entrant will not express hostility by lying down on the floor and kicking and screaming; at least, he won't behave this way in the presence of his schoolmates. But he will call names, tease, boast in provocative fashion, and fight by way of making his feelings known to the group. The adult who understands him will not try to restrain these hostile expressions too rigidly, not even in the classroom. Healthy release of hostile feelings is as important to this young school child as it is to the nursery school baby; but, more than the nursery school baby, he can be encouraged to temper his overt behavior. It is all right to "get mad" or to "feel mean" or to "hate" the teacher, but the more nearly one approaches the great age of six, the more clearly one can see that one may not vent these feelings in ways which are hurtful to others or even just too disrupting to classroom activities.

To many adults a child's social maturity, that is, his social competence and poise, is reflected in his manners. Does he say "please," "thank you," and "excuse me" when these amenities are called for?

Does he greet his teacher with a polite "Good morning, Miss Jones"? Does he rise when the principal enters the room? Does he remember to say, "Thank you very much for asking me to the party, Mrs. Brown. I had a lovely time"? If he does not, adults who bring to modern education the conventions which were so much a part of their own upbringing judge the child to be badly brought up, not a nice child, not sufficiently well behaved to be promoted to first grade! Some of the more embittered will offer the explanation, "This progressive education doesn't teach them any manners."

As a matter of fact, the "progressive educator" values highly, as indications of healthy emotional development, social amenities which express honest feeling. Children who have grown up in homes where "please," "thank you," and "excuse me" are used habitually and naturally and with the warmth of affection behind the mere words generally carry over this genuine courtesy in their school relationships. Wise teachers show appreciation of these pleasant expressions and are careful to respond in kind. Above all, such teachers respond warmly to the feeling which prompts the words or the act and appreciate the feeling even when the form is not quite correct.

A little girl had looked forward all summer to her first day at school. She is a wholesome outgoing little girl, and she walked right up to the teacher with her hand out and said, "Good morning," with no prompting whatever from her mother. Unfortunately for this social experience, the little girl is left-handed, and in this instance forgot to extend what is to her her "wrong" hand. The teacher folded her own arms behind her back and said, "In this class, we shake hands with our *right* hand." The little girl has been in school a year. She hasn't been very happy and she is less friendly and sociable than she was a year ago.

It doesn't seem too important to say, "Good morning, Miss X.," and extend the six-year-old hand every single day when you are glad to come to school, glad to see your teacher, anxious to start work and play, and just plain "Hi!" will be sufficient. It is therefore inappropriate to insist on this formality.

It goes without saying that the child's behavior in difficult or painful situations is a measure of his emotional development as well as his social competence. The hostess apologized to Bob and his mother for an excessively tough cut of meat. Hacking away industriously and not too noisily, this six-year-old found voice to say, "That's all right. Mother says tough things are good for my teeth."

Or as a test of a different sort, Nancy must have a stitch to take care of that cut in her chin. Nancy's doctor has taken care of her all her life; he is a skillful pediatrician and thoroughly accepting of his small patients. He has needed to be all of these things to serve Nancy. She attacks both him and his nurse when they try to help her. This time, at six, she bit the nurse, kicked the doctor, and another nurse had to be called in to restrain her forcibly. Bill, in a similar situation, was "plenty frightened"; but he held on to his father's hand and went through with it with scarcely a whimper. No trace of hostility toward doctor or nurse was evident; they are his helpful friends.

"Right and Wrong" at Five to Six

A group of kindergarten children was discussing what you needed to know in order to be "promoted" to first grade. One little girl, a model citizen, remarked thoughtfully, "You need to know not to take money out of your mother's pocketbook."

This little girl had correctly associated respect for other people's property with maturity. The average school entrant, coming from a home where his own possessions are respected, knows that you do not help yourself from your mother's pocketbook without special permission. Probably, too, as a result of repeated experiences reasonably well guided by the adults at home, the average school entrant knows that you respect the property of playmates and teachers and other people outside of the family. Also, the young school child, always providing that he has had the right sort of adult help, knows that parents and friends and people generally have a right to be told the truth in specific situations, although it is still quite normal and average for him to find truth-telling difficult simply because of his lively imagination and the charming egotism which convinces him that what he *wants* to be the truth *is* the truth. However, it is important to remember that his "moral judgment" is the outcome of only very limited experience. You can perhaps count on him to be honest in familiar situations; you cannot rely on his being "honest" in novel situations.

In the writer's experience, wholesome, well-loved children will express feelings about "moral" situations which are astonishing to their elders. A group of very young second graders was upset by an incident involving one of their number who "stole" a good rubber ball and then sold it for 10 cents. (The sale was responsible for the matter's becoming public knowledge.) It was necessary to have a group discussion so that feelings might have expression. To the teacher's surprise, these children felt that taking the ball was not at all serious, since the child from whom it was taken had plenty of toys. But *selling* it for 10 cents was so utterly reprehensible that it was difficult for the seller to regain status in the group.

The incident just described illustrates not only the vagaries of the young child's moral judgment but also the extent to which such judgment reflects the social and economic status of the child's family. The group concerned in the ball difficulty represented a high-income bracket as well as a community in which the majority of the children were plentifully supplied with well-chosen play materials and, on the whole, loved and accepted by their families. Because of the abundance of toys, one extra ball did not seem to be important enough to represent a moral issue, but bringing money into the picture was something the group found very difficult to accept.

Individual Differences

The discussion so far in this chapter has centered around the average. The inaccuracy of the term average and the disservice accomplished through the misuse of norms should be understood even by the beginning student of child development. The most average of all average children will be either better than average or less than average in some of the traits which make up the intricate pattern of total behavior. Norms, it cannot be stated too frequently or too emphatically, represent behavior typical of large numbers of subjects, five or six or eight or ten years old, or city children from families of a given economic status, or rural children, or any significant classification. Assessing a particular child's growth status by comparing his behavior with established norms for his group yields the information that in one or more specific behavior traits this child's performance equals or excels or falls short of this group's performance as a whole. Such an assessment, thus, merely yields specific facts which are useful to the clinician or the educator or the intelligent parent when they are taken in conjunction with many other known facts about the individual child.

Differences in Physical Development

In a previous section, certain physical measurements of the child at school entrance were presented in contrast to these same measurements at birth. It was noted that the child at school entrance is better than twice as tall as he was at birth. Since height at birth among full-term babies in our culture ranges from around 17 to around 24 inches, it is apparent that at school entrance the range of children's heights in a given first grade probably will be several inches. Now, height may have a distinct bearing upon a pupil's status in his peer group, especially when considered in relation to other characteristics. The smallest child in the class may also be the brightest, or thought to be brighter than she in fact is, because her small stature makes her look younger than her classmates. Conversely, the tallest child may be the least mature mentally, or may seem less intelligent than he is, because his mature physique makes him seem older. It does not require much imagination to understand how great a bearing physical proportions may have upon social behavior and general personality traits; certainly anyone who has watched children at play knows how neuromuscular development affects group standing. The child who is poorly coordinated is the last one chosen in games requiring speed and accuracy; the child who goes down stairs one step at a time must accept quite a bit of derision in the average first grade. On the other hand, physical prowess at school entrance goes a long way toward making a child a leader.

Differences in Mental Maturity

Wide individual differences in mental maturity due to differences in preschool experience have already been noted. In addition, even the most ardent environmentalist must also admit the existence of differences which are congenital, if not, strictly speaking, "inherited." So the first grade, made up of boys and girls of very nearly the same chronological age, may represent a range in mental maturity of three years or more. For the wholesome development of individual personalities, it is most important that the teacher of an entering class understand and respect this variation and that, in guiding group projects, she is careful to provide tasks and roles of sufficient variety and degrees of difficulty to permit every child to participate successfully.

Differences in Emotional Maturity and Social Behavior

No discussion of emotional and social maturity in terms of the average five-to-six-year-old is adequate to prepare an adult to deal with a group of these young persons. True, certain communities and neighborhoods have developed characteristic mores which assure some homogeneity in social behavior and also some common standards as to the accepted forms of emotional expression.[4] Nevertheless, each child will have needs which are especially his and which differ from his neighbor's needs because he has grown up in a particular family. In struggling to satisfy these needs, his efforts are therefore unique, and not average.

THE CONCEPT OF "READINESS"

The teacher of the entering primary class in a good school today is concerned with her pupil's readiness to learn the tools of communication and expression. In contrast with first-grade programs of a few years ago, the entering grade today embarks upon a "readiness" program based on the facts of child development discussed in this chapter. As the child's eyes are not yet fully developed and his finer muscles are still generally immature when he enters school, the teaching of reading is deferred for most school entrants at least until the end of the first half year. Individual children's degrees of "reading readiness" are measured by readiness tests, and the first-grade teacher devotes her efforts toward providing a wealth of experiences for her class which will promote readiness. Plenty of vigorous play, using the large muscles, is an important part of such a program, since it promotes the well-being of the whole young organism. Handling of tools and play materials gradually engages the smaller muscles. Practice in looking at interesting things, listening to the speech of others and to various interesting sounds sharpens perception. Firsthand experiences which will gradually lead to sound generalizations build up the pupils' conceptual background so that they are ready to learn symbols and bring to this learning a good foundation of meanings acquired through firsthand contact with the world around them. The healthy five-to-six-year-old supplies his own vigorous motivation to learning through his experiences; therefore, the teacher does not need to use artificial devices to interest him in the pursuit of knowledge. Not only in the case of the young child, but throughout the educative process, the emphasis today is upon pupil *learning* rather than upon school *teaching*. Therefore, an important part of the teacher's job is to "set the stage" by providing an environment that stimulates curiosity and, hence, learning. The older type of first grade, with screwed-down desks, a border of bright Mother Goose and other pictures for children, usually hung at the adult eye level rather than at the child's, hardly invited much investigation. A first-grade classroom today provides many invitations to learning: growing plants, goldfish, turtles, perhaps a rabbit; a "science" corner with magnet and prism and mechanical gadgets; blocks, easels, and varieties of paint; sand and clay; a costume box and endless miscellaneous gear are all close at hand and readily accessible to the pupils. Excursions in the immediate neighborhood and farther afield are part of the regular program of building readiness. These provisions are not made because, as some critics say, "Progressive schools want the children to play all the time," but because the careful study of children has finally taught educators that this is the way children learn most thoroughly and effectively in the primary grades. It remains the teacher's responsibility to guide this manifold activity so that pupil growth ensues, especially guiding them in the development of clear concepts and growing capacity for critical thinking and problem solving.

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[4] See Allison Davis and Robert Havighurst, *Father of the Man.* This is a significant study of the behavior of middle-class in contrast to working-class children in an American community, showing the influence of class mores.

THE CONCEPT OF SELF-ACCEPTANCE

Self-acceptance is now thought to be the keystone in the development of wholesome personality. In the slow, steady growth of self-esteem characteristic of the secure, emotionally healthy child, school entrance may precipitate a crisis. The child must now play successfully the roles of a group member and a learner in a situation far more structured, in many schools, than the nursery school or kindergarten, and radically different from the closely personal environment of the home. Continued progress toward maturity is contingent first upon playing the roles required in the new situation and upon consequent acceptance by, and secure status within, the group. In this very important social process, both the adults at home and the teacher at school play an important part. In the school situation, it is imperative that the teacher be steadily and consistently supportive in her attitude toward the efforts of her young pupils to achieve status. This help is especially vital in those cases in which school entrants have somehow failed to gain in self-acceptance during their preschool years. Here, even more than in the case of the normal child, intelligent appraisal of individual needs and capacities is urgent, to the end that each individual be helped in setting goals both within his capacity and worthy of his best efforts. The child's inner confidence, to repeat part of a quotation from Erikson used in an earlier chapter, "gains real strength only from wholehearted and consistent recognition of *real accomplishment.*" [5]

The strengthening of this inner confidence with respect to personal achievement outside the home environment is, therefore, a very special aim of the primary school teacher.

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[5] Erik Homburger Erikson, *Childhood and Society*, p. 208.

CHAPTER VI

The Physical Growth of Children

The child a charter shall inherit
For a natural growth in flesh and spirit.[1]

THE SCHOOL'S CONCERN FOR PHYSICAL DEVELOPMENT

The traditional school of a generation or so ago gave little thought to the child's physical well-being. Nutrition, health, physical growth, cleanliness, and some understanding of how to care for the body intelligently were considered to be subjects for home training and parental guidance. In fact, the very first published book on the physical hygiene of the school child appeared as late as 1914.[2] Even today it is likely that a number of new teachers are being appointed to our schools whose knowledge of children's physical needs is too meager for effective health supervision, and that a number of older teachers already in service have failed to keep abreast of the times in this matter. However, it may be said on the brighter side of the picture that the majority of the nation's school systems are now on the alert and ready to accept responsibility for their share in the wholesome physical development of school children.

The modern progressive school's concern for the health of its pupils is demonstrated in several effective ways. The readiness program discussed in the last chapter is planned with special emphasis upon the young school entrant's physical needs, for opportunity to exercise the larger muscles during much of the school day, for the deferment of activities involving strain on imperfectly developed eye structure, and for participation in projects in the course of which no heavy demands are made upon any of the finer muscles. Further, programs are so arranged that periods of activity are balanced by periods of rest. In many schools hot food, selected to meet the nutritional needs of growing children, is provided for the noonday meal. As part of their curricular activities, pupils are encouraged to learn about food values and to gather information about other physical needs. In making these plans, school administrators, curriculum makers, and classroom teachers can now avail themselves of all the accurate information concerning growth trends and health requirements gathered during more than a quarter century of scientific research.

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[1] *The Children's Charter.*

[2] Lewis Terman, *The Physical Hygiene of the School Child.*

Growth in Height and Weight

Height and weight increase during childhood at quite steady rates. The rate of weight gain continues at nearly twice the rate of height gain, and there are other important changes in proportion. The lower limbs grow faster in proportion than does the length of the stem; on the other hand, neither shoulder breadth nor pelvic breadth increases as rapidly as stem length, although the pelvis grows faster than the shoulder breadth. The result of these proportional changes is a longer-legged, longer-bodied, and flatter-bodied child. This child, when healthy and vigorous, is typically graceful and swift of movement, self-assured in games requiring physical skill, competent in the management of bicycles and skates and skis.

With the onset of puberty, the steady rate of physical growth is replaced by a sharp spurt, a sudden acceleration resulting in rapid increases in height and weight (see Fig. 1). The poise and assurance characteristic of "the maturity of childhood" give place to the awkwardness and characteristic unease of the "baby adolescent." Probably the best-adjusted of youngsters have moments when their striking increments in height and/or weight, their rapidly growing hands and feet, are somewhat of a shock to themselves. Adult witticisms, even the most kindly, are entirely out of place at this time, when many children actually need sympathetic help in accepting their extraordinary change in stature. Pubescent changes will be the subject of a later chapter in this book.

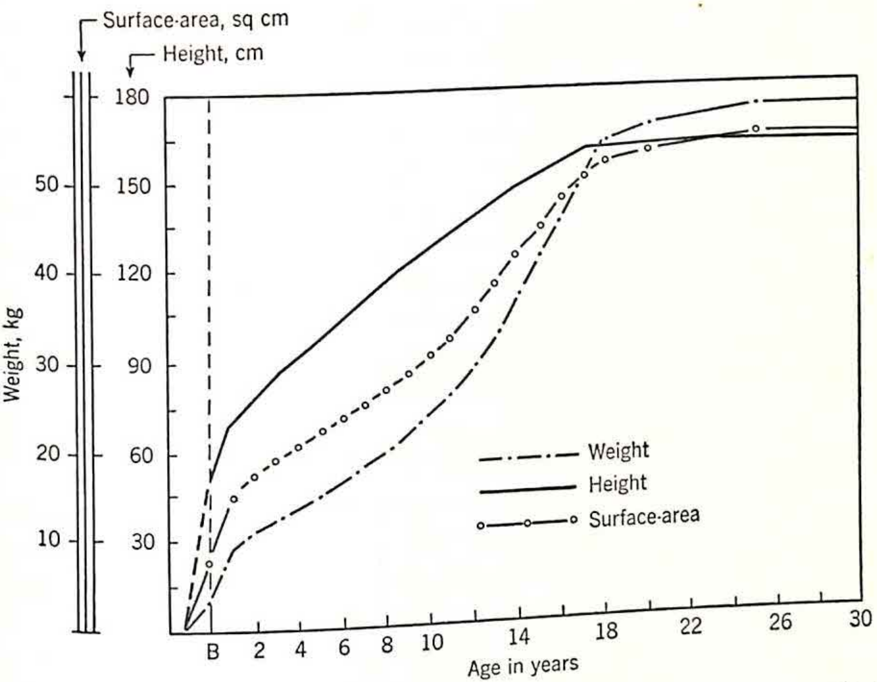

Fig. 1. Growth curves for height, surface area, and weight drawn according to Quetelet's figures. (*Given by E. Boyd, in Growth of the surface area of the human body, Univ. Minn. Inst. Child Welf. Monogr., No.* 10, 1935.

Differences in Rate of Growth

Among Various Traits of the Organism

Although students of child development today all subscribe to the basic principle that the organism functions as a unit in any activity, the various traits or characteristics, physical, mental, and emotional, do not grow at equal rates. A glance at Fig. 1 will show that the different body tissues themselves develop at differing rates. Although these rates are probably set by biological inheritance, authorities are in agreement that they may be modified by environmental factors and that accelerated or retarded growth in one trait may affect the growth of other traits. Olson [3] and other authorities hold that a given child has only a certain reservoir of "growth potential." This would give substance to the popular idea that children may grow so fast that they have little energy left for school work or that a particular youngster may hamper his physical development by overambitious concentration on school work. Perhaps a simpler explanation is the one offered by still other authorities,[4] who simply account for disproportionate growth trends on the basis of the time and attention devoted to the cultivation of one trait at the expense of others. Thus a great deal of time devoted to study might leave too little time for rest and recreation in an individual case with resulting retardation in physical development (see Figs. 2 and 3).

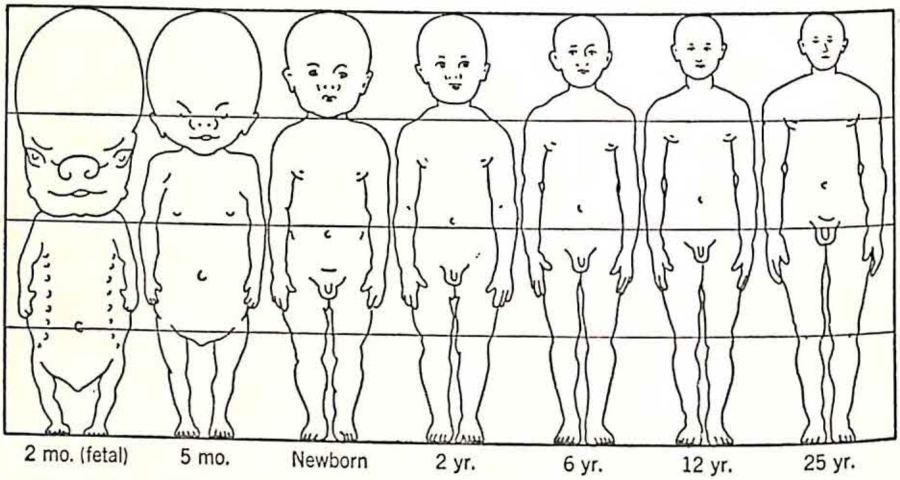

FIG. 2. Changes in form and proportion of the human body during fetal and postnatal life. (*From C. M. Jackson, "Some Aspects of Form and Growth," in W. J. Robbins, S. Brody, A. G. Hogan, C. M. Jackson, and C. W. Green, Growth, Yale University Press, New Haven,* 1928, *p.* 118.)

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[3] Willard C. Olson, "The Organism As a Whole: Interrelationships in Physical, Mental, and Emotional Development," in *Pupil Development and Curriculum,* by staff members of the School of Education, University of Michigan.

[4] See Marion Breckenridge and E. Lee Vincent, *Child Development.*

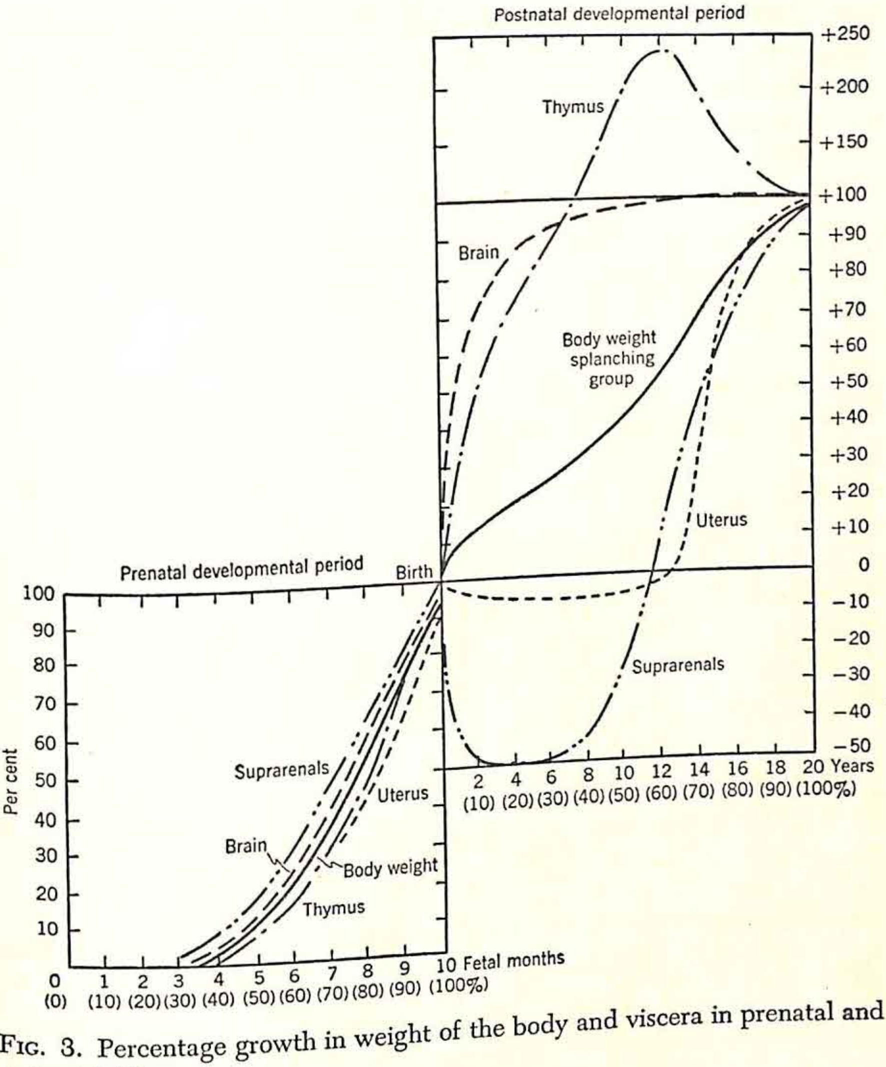

FIG. 3. Percentage growth in weight of the body and viscera in prenatal and postnatal life.

Between the Sexes

Comparing the growth curves of boys and girls during the early school years (see Fig. 4), it is apparent that there is little difference in rate of body growth, although boys tend to be a little taller and heavier during much of the growth period. The growth rates of different parts of the body reveal differences when examined: for instance, boys are larger than girls in thoracic circumference and girth of forearm throughout the growth period; on the other hand, girls have a larger thigh than boys from three to eighteen years. These and other variations in growth trends represent the respective growth characteristics of males and females throughout the

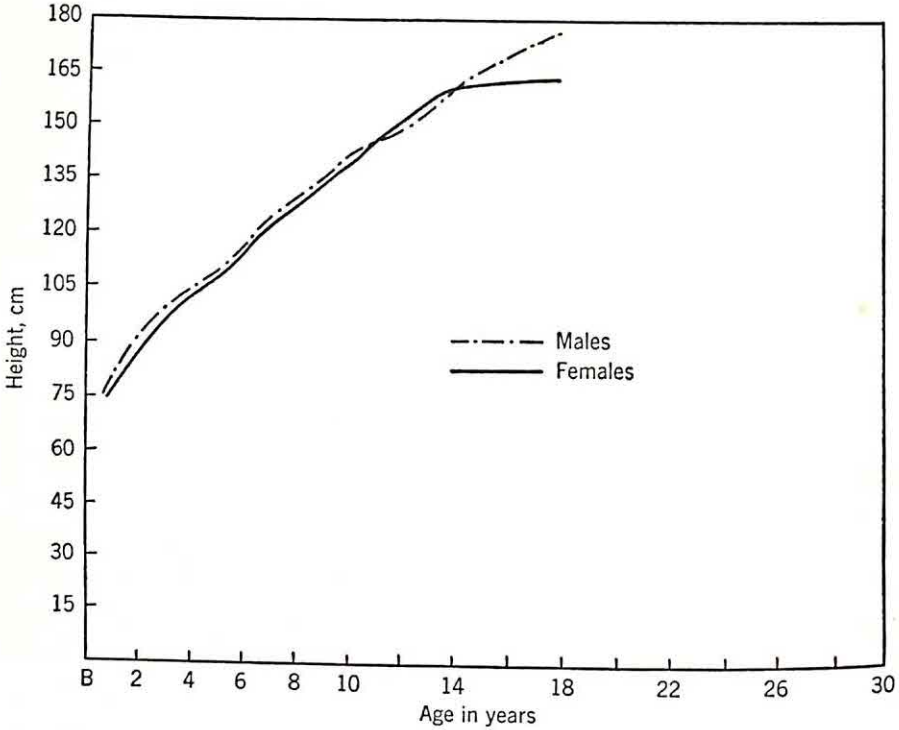

FIG. 4. Growth in stature, males and females. (*Drawn by Helen Thompson, in Leonard Carmichael (ed.), Manual of Child Psychology, p.* 267, *from figures given by H. V. Meredith, in The rhythm of physical growth: A study of eighteen anthropometric measurements on Iowa City white males ranging in age between birth and eighteen years, Univ. Ia. Stud. Child Welf., Vol.* 11, 1935, *p.* 44, *and B. Boynton, in The physical growth of girls: A study of the rhythm of physical growth from anthropometric measurements on girls between birth and eighteen years, Univ. Ia. Stud. Child Welf., Vol.* 12, 1936, *p.* 12.)

course of development. The most striking difference, however, and the one most significant for the youngsters' emotional and social development lies in the chronological age at which boys and girls respectively reach the period of maximum growth known as the preadolescent spurt. Girls reach this period two years ahead of boys, on the average. The average age of maximum growth for girls is 12.5 years; the average for boys is 14.8.[5] Also, the careful analysis of one substantial group of data seems to show that there are two periods of accelerated growth for girls of school age: a preliminary period from seven or eight to between eleven and thirteen, and the true preadolescent spurt from eleven to thirteen to sixteen or thereabouts. Girls growing more rapidly than the average during the earlier period grow less rapidly during the second.[6] Thus, girls tend to outstrip boys in body growth during the middle and latter part of the elementary school period, so reversing for a brief time the general picture of the average male as consistently taller and heavier than the average female.

Among Individuals at Any Given Chronological Age

The range in weight and height among any unselected group of school children at a given chronological age is great. Since a school grade is not even strictly homogeneous with respect to chronological age, the range in size in the third grade may be from 2 feet 6 inches to 5 feet 5 inches.[7] The preadolescent growth spurt may occur in normal young people at any time within a wide latitude of years: "Women of excellent health may reach puberty as early as the ninth year and as late as the twentieth. . . . Some girls are in late adolescence at ten years of age; some are in early adolescence at twenty years." [8] There are much less reliable data available concerning the maturation of boys, but what figures there are indicate a wide range in age. One investigator [9] found the range for male pubescence to be 12 to 17.5 years among his subjects. Another[10] found a range from 10 to 15 years of age.

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[5] Frank K. Shuttleworth, The physical and mental growth of boys and girls age six to nineteen in relation to age at maximum growth, *Monogr. Soc. Res. Child Develpm.*, No. 3, 1939.

[6] H. V. Muhsam, Correlation in growth, *Hum. Biol.*, Vol. 19, 1947, pp. 260–269 (based on correlation analysis of Wilson's [1935] seriatim measurements on heights and weights of 275 public school girls).

[7] Horace B. English, *Child Psychology*.

[8] Wayne Dennis, "The Adolescent," in Leonard Carmichael (ed.), *Manual of Child Psychology*, p. 641.

[9] C. W. Crampton, cited by Dennis, *op. cit.*, p. 644.

IMPLICATIONS OF VARYING GROWTH RATES FOR SOCIAL AND EMOTIONAL DEVELOPMENT

The social and emotional significance of any substantial deviation from the average, in either a plus or minus direction, will be apparent to everyone. The reader is invited to use his imagination, figuring out what effect it may have on Bobby Smith to be the "shrimp" in the third grade, and what effect it has on Laura to shoot up suddenly to adolescent proportions when she has just arrived in grade five. Of course, no two Bobby Smiths and no two Lauras will react to the situation in quite the same fashion, since no two will be coping with this growth phenomenon or that in quite the same context, as both personal development and social milieu will vary greatly from child to child. To one child, too, being "different" in physical status will be a matter of slight concern, while to another it may be a catastrophe, all depending upon such intangible factors as self-acceptance, group status, family expectations for this child, and the like. Indeed, it may even be an asset.

Isabel was adopted at an early age into a high-income-bracket family. Isabel had ear trouble during her second year and did not develop as rapidly as many other little children. She was a pretty little girl, very dainty and small-boned. When she entered nursery school at four, she was placed in the three-year-old group because of her small stature and her general immaturity. She was smaller than many of the children in this group; as time went on she gained status as "the baby" in all house play, was much sought for as a playmate and overprotected by the younger, bigger children. When, the next year, the other five-year-olds went on to kindergarten, quite naturally she remained in nursery school. Meanwhile, her adoptive parents, concerned about her future and desiring to plan wisely, arranged to have her tested by a psychologist. Informal testing of the performance variety and prolonged observation yielded the information that she was functioning at about a usual four-year-old level when already past five. Intelligent parents made wise plans for their attractive little daughter. She went to a private school when she was a little over six, entered the five-year-old group, and continued to progress with that group right through the ninth grade. Consistently the smallest, "cutest" little girl, socially well adjusted, slow in academic work, but having a good singing voice, she is invited to every party and, to the superficial observer, looks a little young for her "crowd." In another setting, with less wise guidance, her diminutive stature and rather dull intelligence would have reinforced each other in placing her in an inferior status. Placed as Isabel in fact was, her marked deviation from normal size and weight proved an invaluable asset to her and to the adults who helped her plan her activities. It is of interest to note that Isabel, now sixteen, has just reached the menarche. So have a number of her younger friends.

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[10] H. S. Dimock, cited by Dennis, *op. cit.*, p. 643.

HEIGHT, WEIGHT, AND BODY BUILD

Height and weight, always popularly accepted as important measures of growth and nutritional status, were very carefully studied with the coming of a scientific interest in the development of the "whole child." Height-weight tables, now familiar to nearly everyone and subject to criticism by the more enlightened, came into general use in progressive school health services by the mid-1920's. Commenting on the use of height-weight tables, Helen Thompson says: "Although weight is an acknowledged indication of nutritional status, optimum weight is an individual requirement, since it depends on age, stature, and body build as well as on nutrition. . . . Height-weight norms, which are widely used, account for differences in height but not for body build." [11]

Since neither age-weight nor height-weight tables can be shown to provide adequate means of estimating nutritional status in individual cases, a number of people have conducted research directed toward finding more satisfactory measures. Typical of such studies is an index derived by Franzen and Palmer [12] for use with children seven to twelve years old, based on a combination of several measurements: arm girth with arm flexed plus arm girth with arm extended, plus bitrochanteric width.[13] Dearborn and Rothney [14] derived a formula for use in determining normal weight for both sexes, ages fourteen to eighteen. This, too, is based on several measurements: chest width, chest depth, standing height, and bi-iliac width.[15]

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[11] Helen Thompson, "Physical Growth," in Carmichael (ed.), *op. cit.*, p. 275.

[12] Raymond Hugh Franzen and George Turner Palmer, *The ACH Index of Nutritional Status.*

The Wetzel grid,[16] a device by which a given child's status may be determined in terms of his height, weight, and age, makes it possible to evaluate each individual's growth course in terms of that individual's own standards. The grid carries seven channels, each representing a particular growth course typical of a certain body build. A child's growth normally progresses in a particular channel; should his course leave that channel, this would be an indication of a change in his health status. The Wetzel grid is far more satisfactory than an age-weight or height-weight table, because it takes account of body build and, thus, makes it possible to evaluate the growth of the particular child, the stocky child with short limbs or the long-limbed slender child, in terms of his own proper standards. It must be remembered, however, that notwithstanding this important correction of earlier devices, the grid still gives an estimate of physical status only in terms of height, weight, and age.

Caring for the Child's Physical Well-being

Again we are faced with the awkwardness of discussing one particular aspect of growth by itself, when we are constantly reminded that every instance of growth involves the whole organism. At the same time, helping the child become aware of his physical needs and grow increasingly competent in taking care of them independently is an important educational aim requiring some special consideration in the light of the general principles of child development. Good attitudes about eating are an important factor in maintaining good general health. These attitudes, if developed in a calm, supportive family situation, should be well established by the time the child reaches school age. Unfortunately, however, many children reach school age with "spoiled" attitudes toward food, either because their parents have made no particular effort to plan their meals intelligently or because the family has been overconscious of Junior, and his eating and mealtimes have been battles royal between Junior and his anxious parents. There is good evidence today that if children have access to a variety of foods they will eventually select for themselves an adequate diet. This is in direct conflict with the big authorities on child rearing of a generation ago, when the humble spinach and the innocent carrot touched off family battles if refused by Junior, and many very conscientious parents today still operate too much on prejudices about diet which are now quite discarded by authorities. The children with the spoiled food habits, for whatever reason the spoiling has come about, can be given intelligent help through well-planned classroom activities in which there is an unemotional discussion of food values, a type of discussion infrequently possible in the home. At the same time, the well-trained teacher today is aware of the fact that unfortunate attitudes toward food are not isolated phenomena but often revelatory of deep-rooted attitudes toward self and others. Many a boy or girl who eats voraciously does so in the unconscious desire to satisfy a far different hunger for love; and many a child who "simply starves himself" is expressing deep aggression rather than loss of appetite. At the same time "food jags" may be mainly due to a temporary organic need, although more complex motivations are also possible.

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[13] Bitrochanteric width: a measurement of the size of the female pelvis.

[14] Walter Fenno Dearborn and J. William Rothney, Basing weight standards upon linear bodily dimensions, *Growth,* Vol. 2, pp. 197–212.

[15] Bi-iliac width: the width between the crests of the ilium, or uppermost section of the hipbone. Both this and bitrochanteric width are used in obstetrics to determine the space available for delivering a baby.

[16] N. C. Wetzel, Physical fitness in terms of physique, development, and basal metabolism, *J. Amer. Med. Ass.,* Vol. 116, pp. 1185–1195.

The child needs a growing understanding of sources of infection and means of protecting himself therefrom. Here, too, there has been a great change in the attitude of the expert in the last fifteen years or so. Time was when parents and teachers were so afraid of "germs" that a child who failed to wash his hands before eating or, worse, ate something that had been on the floor was due to be scolded hysterically and warned of the great risk of "catching something." The stress today is upon avoiding panic and germ phobia while, at the same time, helping the child develop clear concepts on fundamental health rules as exemplified in clean dishes, reasonably clean hands, the individual drinking cup, the personal toothbrush, hairbrush, and comb. The child who is developing normally as a total personality will be interested in and appreciative of "reasons why" in the field of health and personal hygiene. The child who cannot or will not learn to be acceptably neat and clean in his habits or who, contrariwise, is finicky and overconcerned for cleanliness, again, in all probability, has other difficulties than lack of competence in physical hygiene.

School-age children should be oriented toward the preadolescent growth spurt in advance of its arrival, as well as to the other phenomena of the approaching adolescent period. These are only some of the many matters about which vigorous nines and tens are healthily curious, but they are important matters. Discussions with trusted, companionable adults help; so do discussions with peer groups and the viewing of well-chosen visual aids. Secure youngsters take prospective changes in their stride, although, when the changes actually arrive, the baby adolescent may have uneasy moments.

Susan is eleven years old and in the sixth grade. She is a little girl with surprising initiative, able to make good plans and put them through, either by herself or with a group. Susan's cousin is to be married in something less than a year; with characteristic initiative, Susan wrote to ask if she might be a junior bridesmaid. The cousin replied enthusiastically, sending the little girl a description of the projected bridesmaids' costumes with a sketch of their strapless bodices. She suggested in her letter that perhaps Susan's mother could rig up a different type of bodice for her which would harmonize well with the general costume scheme. In talking all this over with her family, Susan remarked, "Perhaps by the time she gets married I won't need a special sort of dress."

ILLNESS AND PHYSICAL HANDICAPS

It is said: "Two-thirds of all children have health problems sufficiently serious that they may affect psychological development." [17] The approximate distribution of physical handicaps among school children, according to the author just quoted, is one-third major physical handicaps, one-third minor defects, leaving only one-third with no physical difficulty. It is evident that injuries to the central nervous system affect behavior most directly. Much attention is being focused at the present time upon the effects of brain injuries at birth or in early infancy. The etiology of spastic paralysis has long been known, but the effects of a very mild injury, so slight that it may pass without notice, yet leaving the child with characteristic clumsiness and poor motor coordination, have only recently been appreciated. Children who have sustained such an injury and who are, perhaps, the butt of their peer group because of their awkwardness may be helped by early diagnosis and very special motor training. The effect of oxygen privation upon brain tissue was suggested in an earlier chapter; a difficult birth history may account for mental deficiency in some cases. Encephalitis, also known as sleeping sickness, is frequently followed by behavior disorder; cases so mild that they were barely diagnosed have been known to produce drastic changes. Epilepsy, also, sometimes results in mental deterioration, and the social effects of the seizures scarcely call for comment. Survivors of poliomyelitis present a sadly familiar problem to the educator; but this writer has known children who, thanks to the courage and insight of their parents and/or their physicians, have been so wisely guided that, even when physical impairment was severe, psychological damage was very slight. In all cases, whether or not a cure can be brought about, wise guidance can greatly improve the handicapped child's outlook for happiness.

Any long illness may cause personality changes which tend to prove the truth of the old saying, "A sick child is a spoiled child." The growing personality is spoiled in the first place if the family is not unusually wise in expecting from the sick child reasonable acceptance of the fact that other people, too, need consideration. Separation from normal association with peers, loss of status in the peer group, even though the loss be temporary, represent serious threats to wholesome development. However, all of this potential damage can be mitigated by adult friends and teachers who understand the sick child's needs and how seriously these may be frustrated by the conditions of illness.

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[17] English, *op. cit.*, p. 263.

Glandular disturbances, through affecting the whole body chemistry, affect behavior. The thyroid, adrenal, and pituitary glands are of special importance in this respect. Physical symptoms pointing to glandular difficulty cannot be ignored with safety, even though, from a standpoint of physical well-being, the condition is not thought to be serious.

English [18] cites a case in point. A little boy, so overweight that he could not participate in games except as a spectator, was forbidden sweets by his parents on the doctor's orders. But the boy's craving for sweets was overwhelming and itself a symptom of glandular imbalance. He craved candy to such an extent that he took money from other children to be able to buy it. Then, on the playground, poor "Fatso" found that he could be the center of attention by providing other children with candy. This he did on the strength of the money he was pilfering from these same children. Of course, he was detected. Following this, glandular treatment was instituted, and both his excessive craving for sweets and his overweight were reduced, but the psychological damage, the unacceptable attitude toward other people's property and the equally unfortunate conviction that friendship can be bought, required further help. It took a long course of psychological care and educational effort to overcome the effects of the experience, and, as English points out, to build this child up generally as a person: "the glandular treatment could not supply the physical and social skills which (Roscoe) had failed to learn during his years of obese isolation from the world of childhood play." [19] A wiser estimate of how serious for this child his obesity was and the earlier institution of treatment for his physical condition might well have forestalled much of his psychological difficulty.

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[18] *Ibid.*, p. 265.

[19] *Ibid.*

"Isolation from the world of childhood play," even though this isolation is neither permanent nor complete, is the single most disastrous effect of physical handicap of any sort on personality development. In an earlier chapter, stress was laid upon the importance of play, or joyful activity and investigation for the sheer joy of being active and investigating, in the development of the preschool child. The child who has enjoyed rich play experiences comes to the school with a high degree of readiness for the school's activities. On the other hand, the child whose early play experience has been impoverished by illness or incapacitating injury or sensory defect needs very special help in overcoming this initial handicap. The school child and the adolescent with a physical handicap must learn how to gain and maintain status in his peer group irrespective of this deficiency. Inability to run swiftly or to catch a ball or to hit a target puts peer-group status in jeopardy; the child with the mild birth injury or, for that matter, the myopic child is unable to compete with the average child in speed, grace, and precision of movement. Too frequently teachers and even parents think only of the direct effect of poor eyesight on school achievement and are inclined to disregard the effect of nearsightedness on skill in play and the consequent threat to peer-group status.

Of every 100 average school children, 40 will have a visual defect. Of these 15 will have defects which can be remedied by glasses; 10 of these 15 will not have the needed glasses. Parents and teachers should be alert in catching indications that a child is suffering from any sort of eyestrain and diligent in securing the right help for the child when the strain is present. This may take a lot of doing: sometimes poverty makes it difficult to get the glasses the child needs; sometimes parental ignorance or indifference places the school in an awkward predicament. Sometimes the child himself fights the very idea of glasses, themselves occasionally a threat to peer-group status. But the issue of eyesight is important, and not merely for learning to read.

Defective hearing, while less frequent than defective vision among school children, is also, perhaps, less frequently detected than is visual difficulty. Like poor sight, poor hearing affects the child's chances of acceptance by others and hence of acceptance by himself.

It is by no means true that peer groups always reject handicapped members; the behavior of the handicapped may be so balanced and adequate that they are fully accepted. In some instances, the peer group tends to overprotect the handicapped child, especially if he has been with the group for a matter of years. In one case, an intelligent ninth grade was so overprotecting of one of their number that the school psychologist found it necessary to call a meeting to which the spastic pupil was not invited, at which she explained that it was quite disastrous for Harry to be waited upon and sheltered at all times. It should be said, though, that Harry had a fine mind and was himself an outgoing, accepting person. For several years he had been with the same group, and he had never failed to participate in the making of worthwhile suggestions and in contributing substantially to group activities.

SUMMARY

The physical health and well-being of the school child are of basic importance for every aspect of his growth. The modern progressive school is alert to its responsibilities for promoting physical health. Growth in weight and height are significant for personality development. There are important differences in rates of growth: (*a*) as between the different traits of the organism, (*b*) as between boys and girls, (*c*) as among the individuals in any school group.

Height and weight, long recognized as indicative of nutritional status, are now known to be insufficient indices of well-being; therefore, more accurate measures are being sought by research workers. The Wetzel grid, which provides for estimates of health in terms of height, weight, and body build, is very useful and represents an advance over earlier tables.

Health education in the modern school is directed toward giving children information concerning food values and toward building wholesome attitudes toward food, toward cleanliness, and toward the whole subject of personal hygiene.

Handicapped or sick children, of whom there are a great many in our schools, require special guidance on the basis of early and competent diagnosis.

Physical development and growth status are as important for psychological reasons as they are for body efficiency, since they have a direct effect on the child's internal picture of himself as a competent, adequate person and therefore influence his behavior.

CHAPTER VII

Intelligence

Comprehension, invention, direction, and censorship: intelligence lies in these four words. ALFRED BINET

THE NATURE OF INTELLIGENCE

A single definition of intelligence which would really satisfy everyone in the field of child psychology has never been forthcoming and, in all probability, will never be enunciated. The author believes that the definition at the head of the present chapter is sufficiently general to be inclusive of all others; at the same time, because it is stated in such general terms, the student of child development will need to meditate upon it in connection with the way in which other authorities have phrased their several definitions. It will be helpful, too, to keep Binet's words in mind while observing people, both adults and children, whom we believe to be intelligent as they go about their everyday affairs. Are these people keen to understand, resourceful in problem solving, planful and well oriented, and also self-critical? If these traits appear in the behavior of our intelligent friends and acquaintances, are they apparent in connection with all or most of life's activities? Is John's Phi Beta Kappa sister as keen to understand how you go about putting in a washer as she is quick to comprehend a problem in mathematics? And how about her resourcefulness in either situation? Being careful not to make rash generalizations, it will be helpful to the student to make observations of intelligent behavior while clearing up his own concept of the nature of intelligence.

Lewis Terman,[1] who translated the famous Binet-Simon intelligence tests and revised them for use in English-speaking cultures, has defined intelligence as the ability to do abstract thinking and to use abstract symbols in the solution of all kinds of problems; he has found size of vocabulary to be the best single indication of general intelligence. Edward L. Thorndike,[2] accepting by implication Terman's emphasis upon abstract thinking, distinguished three aspects of intelligent behavior:

1. Altitude: The harder the tasks an individual can perform, the more intelligent he is.
2. Breadth: The greater the number of different tasks of equal difficulty an individual can carry out, the more intelligent he is.
3. Speed: The more quickly a person can produce a right response, the greater his intelligence.

Of these three aspects, Thorndike believed altitude to be the most important index of intellectual ability.

Thurstone,[3] borrowing from Terman his emphasis on abstract symbols, and from another investigator, Spearman,[4] the idea that intelligence should be subject to factor analysis, identifies eight more or less exclusive component factors in intelligent behavior:

1. S, or *space factor,* being the ability to visualize objects, flat or solid, very important in mechanical aptitude.
2. N, or *number factor,* being the ability to do simple computation, such as is needed by a good cashier.
3. V, or *verbal ability,* that is, verbal reasoning and vocabulary.
4. W, or *word fluency,* ability to produce effective words in any given restricted context (a child may be fluent even though his vocabulary is small).

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[1] Lewis Terman, *The Measurement of Intelligence: An Explanation of and a Complete Guide for the Use of the Stanford Revisions of the Binet-Simon Intelligence Tests.*

[2] Edward L. Thorndike *et al., The Measurement of Intelligence.*

[3] Louis Leon Thurstone, Theories of intelligence, *Sci. Mon.,* Vol. 62, 1946, pp. 101–112.

[4] Carl Spearman, *The Abilities of Man.*

5. *M*, or *memory factor*, ability to store and reproduce perceptual-conceptual materials.

6. *Induction factor*, the ability to discover a rule or principle applying to a series of problems.

7. *Deduction*, or the ability to apply a given principle to a series of problems.

8. *Flexibility* and *speed of closure*,[5] or the ability to interpret instructions quickly, facility in sizing up a situation and forming a tentative hypothesis as to how it may best be dealt with, flexibility in trying out this tentative hypothesis mentally and abandoning it, if it proves unsatisfactory, in favor of a new hypothesis.

Thurstone has concluded that these factors are the primary factors in intelligent behavior, whereas general intelligence, symbolized by g in Spearman's [6] work, is a secondary factor. Accordingly, he believes that a profile, showing an individual's standing on each of these primary factors graphically, is more significant than a single intelligence index. Thurstone has found the same primary abilities in both adults and young children, thus demonstrating that intellectual growth is continuous throughout childhood and youth. This demonstration and the fact that a profile yields information to any intelligent teacher or parent as to where an individual child may need special help make Thurstone's work very significant to the student of child development. A single intelligence rating, based on a series of tests, gives no diagnostic information to the layman unless carefully interpreted by a clinician.

Today some psychologists believe that an adequate concept of the nature of intelligence should take account of the volitional and emotional aspects of behavior as well as the strictly "intellectual" abilities involved in problem solving. In Wechsler's opinion,[7] general intelligence is influenced by such matters as drive, perseveration, and persistence, as well as by anxiety, impulsiveness, security, initiative, and other personal qualities. To many to whom the organismic approach to the study of child behavior, with its emphasis upon integration and the involvement of the total self in any behavior incident, seems by far the most fruitful, this approach in the specialized field of intelligence testing appears to be especially vital and timely.[8]

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[5] In the sense in which this term is used by psychologists of the gestalt school, the perception of a configuration, the completion of a pattern.

[6] Spearman, *op. cit.*

[7] David Wechsler, Cognitive, conative, and non-intellective intelligence, *Amer. Psychologist*, Vol. 5, 1950, pp. 78–83.

THE MEASUREMENT OF INTELLIGENCE

All the specialists interested in the measurement of intelligence must agree upon the basic definition of what intelligence tests in fact test; it is, therefore, accepted that these instruments reveal *native intelligence plus those learned reactions which all individuals in a given culture have had the same opportunity to learn.* Individual authorities, however, will differ in the kinds of test items they include in their individual series or batteries because of their varying concepts of what intelligence itself is. Binet, for instance, equated intelligence with the higher mental processes, or in Terman's conception, the ability to do abstract thinking. Therefore Binet cast about for test items requiring a high degree of abstraction. In his first revision of the Binet tests for English-speaking children, Terman used many of the original Binet-Simon elements; later, in his 1937 revision, he added items from other psychologists and developed a number of new ones also.[9] The standards according to which the new items were developed were the following:

1. Each new element, when tried out on a large number of experimental subjects, should correlate highly with the results of comparable Binet-Simon items in terms of the per cent of children passing the new item successfully at a given age.
2. The percentage of children passing each item should increase with the children's chronological age.

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[8] Numerous other psychologists share the opinion that existing definitions of intelligence are inadequate. Stoddard and Wellman among others have contributed toward finer analyses. The student who wants to follow up these studies will find a number listed in the Bibliography.

[9] Lewis Terman and Mabel Merrill, *Measuring Intelligence*. The authors describe in detail the methods used in the revision.

3. The test items should be easy to administer and susceptible of objective scoring.

4. The new elements should reflect the experiences of all children in our culture, regardless of economic or social status.

5. The assembled tests should sample a wide variety of experiences, that is, abstract words, number concepts, drawing from memory, interpretation of fables and so forth.

A comparison of the two Terman revisions shows important modifications made to keep pace with later thinking on child development. The 1937 scale includes a far greater number and variety of test elements than did the revision published in 1916. Cultural factors, that is, the common experiences of American boys and girls, are given greater consideration. Concrete objects, such as miniature toys, blocks, a form board, are introduced to motivate younger children in their test responses. Directions for administering the test, too, show a relaxation from the severely structured approach of the original Binet-Simon and the earlier Terman revision. The slightest departure from prescribed procedure was strictly taboo in the use of the 1916 scale; there was no provision for refusals, of which there are many, especially in the case of younger children. A refusal was a failure. The 1937 series includes alternate items; if Johnny won't respond to one, the tester may present an alternate stimulus. For instance, if he won't repeat numbers, he may place blocks in a form board instead. While the latest revision still represents the most rigidly structured situation used in the examination of children, the examiner is permitted to vary this situation a little when working with the very young, adapting the procedure somewhat to the child instead of insisting that he adapt to the testing situation in every respect.

By far the greater majority of individually and group-administered tests used today are patterned upon Terman's Binet revisions or show high correlation with them. It is therefore reasonable to conclude that Terman's approach colors our present functional definition of intelligence. The ability to "comprehend, direct, and censor" in solving problems, through the facile use of abstraction and logical thinking, is the ability tested by most intelligence tests, and the individual's success or failure in these activities is taken to represent his degree of intelligence. However, there are many interesting records and anecdotal accounts of the results so far achieved by Thurstone and his collaborators. When, in coming years of research, as much supporting data has been obtained for Thurstone's work as Terman and his associates are able to produce now, the trend in mental measurement may change significantly.

Reporting the Results of Intelligence Tests

The Intelligence Quotient

It dwelt among untrodden ways,
Obscure, unknown to fame,
An I.Q. nobody could raise
But nobody could blame.[10]

This little parody by a member of the first generation of IQ-conscious children suggests some pertinent questions: What is an IQ? What does it do to children and/or their parents when IQs are isolated for consideration and discussion? Is there really no way to raise an IQ, and should one never blame it?

Many years ago the writer saw the class notes of one of her graduate students, a brilliant young Frenchwoman; the pages were liberally sprinkled with the words "eye cue." Probably this could not happen today, and, very likely, every reader of this book can give a passable definition of an intelligence quotient; still, it may not be out of place to discuss the nature and value of this index here. Since it is a quotient, the IQ is a *measure of relationship*, the related terms being *chronological age* and *mental age*, that is, life or organismic age from birth to the present day and the age achieved in an intelligence test. When the mental age equals the chronological, the IQ is 1.00. For convenience, 1.00 is multiplied by 100 and so expressed. When the mental age has outstripped the birthday-reckoned chronological age, the quotient is over 100. For instance, John is ten years old and his mental age is eleven. His IQ, then, is 11/10 × 100, or 110. On the other hand, Sally is eleven years old and the age she achieves on an intelligence test is ten. In this case the IQ equals 10/11 × 100, or 91. Of what use is this information?

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[10] Emma Rounds, "The Moron Turns," in Hughes Mearns, *Creative Youth.*

Neither Sally nor John, nor John's parents nor Sally's parents, can benefit by being told that John's IQ and Sally's are 110 and 91, respectively. If they are aware that an intelligence test has been administered and would like to know the results, the parents of both children may be assured that John or Sally, as the case may be, is a normal youngster, competent to meet the demands of the culture in which he or she is living.

The fact that John stands at the top point of the statistically established normal speed of intellectual development while Sally stands at the lowest point has some significance for the school. The information serves as a guide to the teacher as to about what to expect in the way of intellectual growth for the time being, at least, from each of these two children. It will warn her not to push Sally too hard and perhaps suggest to her that John, for some reason or other, is not working up to capacity. Unfortunately, too many people, even teachers, are prone to think of 110 or 91 IQ as absolute quantities, and, in far too many situations, these numbers remain attached to the individual children to whom they were assigned for the rest of their lives. It cannot be repeated too often that, being a quotient, the IQ expresses a relationship between intellectual growth and life age at the time the test is given and, in so doing, indicates how fast the individual child is maturing intellectually at the moment. In the opinion of the author and of many other students of child development, it would be just as well to leave the IQ quite "unknown to fame."

The question of whether or not an IQ can be raised is related to the argument, familiar to all who know the literature, about the "constancy of the IQ." This argument, again, involves the further controversy of "nature versus nurture." The literature on both sides of the argument is voluminous; much of it is interesting and significant for the advanced student of child development. The conclusions concerning both questions are impossible to state briefly, since they are by no means clear-cut; but there is a strong trend, mentioned in connection with the discussion of early growth in a previous chapter, to concede far greater importance to nurture than was conceded formerly. There is a corresponding tendency, based on many retesting programs, to challenge the constancy of the IQ and to reject, as we have said elsewhere, Arnold Gesell's claims for the predictive value of early childhood tests. The discrepancies found on retesting as between the results of very early testing and tests administered at a later age seem to show that the quality of intelligence that it is possible to test in infancy is either a limited or misleading sample of general intelligence or, perhaps, not at all equivalent to the abilities appearing, say, in the late preschool period. Parents who get a record of their babies' test results are frequently due for a shock of either a plus or minus sort when the same babies are retested four or five years later.

In relating this discussion to the question of whether or not the IQ is constant, a conclusion such as this may be hazarded: it seems that very early tests, while they have some predictive value, show a high margin of error in their prediction. You may take this to indicate that the IQ is inconstant, or you may be inclined to the belief that the wide differences in the type of tests administered, respectively, at two and at six raise a question as to whether the same level of behavior is tested at each age. In this case, the elusive IQ may be constant; it was simply not successfully measured through babyhood responses.

There is considerable evidence to show that in the majority of cases retested the IQ varies only a few points in either direction during the school years. On the other hand, an important minority show startling variations, owing to changes in the environment and to the removal or traumatic building of emotional blocks. Here, too, you may say, "The IQ remained constant; the child was simply accessible to testing at one time and not at the other." To the present writer, this argument becomes academic and sterile. The significant facts uncovered during many years of research in these matters seem to be simply these: the IQ is an index of mental growth rate, a rate which seems to be fairly constant in the majority of individuals tested and retested. However, a minority of people—how large a minority cannot be stated with certainty—show quite spectacular changes in rate of mental growth; that is, in these cases the IQ is *inconstant.* Warm acceptance of a hitherto unloved child, for example, and/or the substituting of a suitable, supportive, challenging situation for one which was unsuitable, hostile, and without positive incentive, may raise the IQ to an important degree. Very destructive experiences, resulting in severe trauma, may cause a substantial drop in the mental growth index. These facts seem to show that nurture may affect nature for good or ill and that the IQ is not inviolate from environmental influence nor is it invariably constant.

Mental Age

Mental age, while subject to the limitations of any man-made test, is a useful measure to the degree that it is correct for an individual child. The MA shows how well a child can meet the ordinary tasks expected in his culture from a person his age. As the MA changes all the time, it cannot be attached to the child as a fixed label. When there is a discrepancy between the opinion of an experienced teacher or, better yet, two or three experienced teachers, and the degree of mental maturity shown by the results of an intelligence test, the individual child should be retested, either with a different form of the same test or with a different instrument. Other things being equal, children tend to be happier in groups where they will find at least some friends of their stage of mental maturity. Therefore, the MA is one valid consideration of where to place a child in school. However, as will appear in later discussions, it should never be taken as the single or even always the most important indication in grade placement.

Intelligence tests generally fall into two main categories. The individual test, of which the Terman-Merrill revision of the Binet-Simon is the most widely used example, is highly reliable for individuals, although by no means infallible. The personal equation enters into the situation, and a particular examiner, even though skillful, may fail to establish rapport with an individual child. (If he is a skillful examiner, he will be aware of this defective relationship and make note of it on the testing booklet.) Sometimes extraneous factors, like the weather, loss of sleep from whatever reason, and, above all, anxiety aroused by some recent happening, may handicap the child during the test, resulting in a low score. When results are out of line with the child's general performance in school or with what is generally thought of him by adults and by his peer group, he should be retested with another form of the same test or by an altogether different instrument. Group tests, since they are administered to groups of children simultaneously, are more economical. There are many excellent group intelligence tests, but any one of them, while highly reliable for large groups, differentiating between the mature, the average, and the immature subjects, may be highly unreliable for individuals. Inaccuracies as great as four years in MA have been reported for individuals who were retested by such tests.

Centile Rank

Most tests provide tables by which an individual's mental status may be estimated in relation to calendar or chronological age. The tables are made from so-called raw scores based on the number of correct responses made by the subjects tested. Given 4,000 such scores, the research worker compiling the table takes the top 1 per cent, or 40 pupils, making the highest records; the range of scores made by these pupils is said to be the 100th centile. The scores made by the next highest centile make up the 99th centile, and so on down. If a pupil gets a score which places him in the 70th centile, he excels the record of 69 out of 100 comparable children; he himself is excelled by 30. A centile score thus shows how well the subject has done relative to other children on a particular test; and the children with whom he is compared are children of his chronological age. A statement about centile rank should always be carefully phrased to indicate the nature of this comparison; for instance, "Mary has a score of 40 on the Z test, which places her in the 70th centile for seven-year-old children."

MAKING USE OF TEST RESULTS

For Classification of Pupils

Educators have long argued the question whether "homogeneous grouping" in school classes, especially in crowded school systems, should not be used to make the teaching task easier and, thus, achieve better results. Those in favor of a measure of this sort must meet the objections of their colleagues in the profession, holding themselves to be equally progressive, who ask, to begin with, "Homogeneous on what basis?" This is a "tough" question because you can't homogenize youngsters as you can milk.

Let us see what would happen if the Blank School were to group its pupils homogeneously on the basis of mental age. On the face of it, MA as a basis for grouping has points; it is true that one basis for choosing friends throughout life is that of comparable intelligence, and it seems an easier task to teach 35 children if they are all of the same mental maturity. If all the children in the fifth grade were mentally ten years old, the teacher would not have to worry about adapting her curriculum and methods to differences in mental maturity.

Bill has an IQ of 85 and an MA of 10. This makes him 11.5 chronologically. Sally has an IQ of 120 and an MA of 10; her chronological age is 8. These children have the same degree of mental maturity at the present moment, but the moment is fleeting. Assuming that these two children are members of the majority among whom the IQ or rate of mental growth is fairly constant, at the end of five months Sally will have added six months to her mental age stature, since her rate of growth is 120, and Bill with a rate of 85 will have added only four and four-fifths months to his. At the end of ten months Sally will be a whole year older mentally, that is, she will have an MA of 11. Bill will be tagging along with a score of 10 years 9.5 months. By the time school reopens in the fall, the snowballing discrepancy will be greater. Meanwhile, how compatible are school age children three and one-half years apart in chronological age? And how happy together are children not only far apart in calendar age but also so different in their *rates* of mental growth?

Let's group the Blank School children on their IQ scores. Let's put Sally and the other fifth graders with IQs of 120 to 130 together in a "rapid" group. Let's put Bill in a "slow" group. Sally has always worked to capacity. Her scores on school examinations, whether standardized or teacher-made, are consistently high. Sally is an "all-around" person, emotionally mature, physically well developed. Mary, with an IQ of 125, has a poor record in school achievement. She has a good deal of suppressed hostility and many babyish ways; she is generally quite insecure. Will Mary thrive in a "high-powered" group or might she not find herself more secure in one where she would certainly have her moments, at least, of triumph, since Mary, being very intelligent, has good ideas? And what about Sally, who has shone happily throughout her early school career as a very bright, attractive little girl? Will she be able to "take" the fact that in this segregated group many of the children will outstrip her in intellectual performance? Will Bill react favorably in a group in which the highest IQ is around 85 and the lowest possibly 72? How homogeneous are these homogeneous groups? How well are they meeting the needs of individuals?

The fact that the MA and the IQ do not provide a formula for homogenizing children does not detract from the importance of these measures, *taken in conjunction* with all the other known facts about individual children, in helping school pupils find their natural peer groups. Mental maturity, we have admitted, is an important consideration in choosing and keeping one's friends, but it is by no means the only one, and a method of placing children in school solely or mainly on the basis of intelligence rating makes neither for true homogeneity nor for happiness.

In General and Specialized Counseling

In all forms of counseling, intelligence ratings have status as important factual data concerning individuals. As we educate people today, in schools and colleges and graduate schools, intelligence scores have high predictive value; there is accurate information as to what, approximately, must be the intellectual status of a person who is going to succeed in a selected high school or a college or graduate school of first rank. The doorway to the professions and important posts in research, business, industry, publishing activities, teaching, indeed, any important post in our society, is reached for the most part through these institutions of learning. Therefore, indirectly at least, an intelligence score is one guidepost in choosing a lifework. But, as is the case in school placement, it is *only one* informative fact about an individual.

INTELLIGENCE AND SOCIAL STATUS

There is some evidence to show that the intelligence tests developed in our culture favor the pupils of high social and economic status. A study made by Kenneth Eels [11] and his associates at the University of Chicago of the responses on intelligence tests made by high- and lower-status pupils showed significant differences between the groups. "Items expressed in strange, academic or bookish words" showed greater differences than those using everyday language. On the other hand, nearly all the test elements showing little or no difference in response are "non-verbal in symbolism . . .or. . .expressed in simple language and deal with objects or concepts equally familiar or unfamiliar to both groups." [12] On the basis of their study, these authors formed the following hypothesis: "High status pupils tend to work harder on the test items, and relatively seldom do they guess; low status pupils, on the other hand, give up more easily and are more inclined to more or less random guessing." [13] They suggest that cultural factors, working through the young people's unconscious identification with their parents, in both groups, explain these observations. The high-status pupils emulate their parents' ambition for education, their struggle to "keep up with the Joneses," their general need to excel. The lower-status pupils, on the other hand, are inclined to accept the educational status of their parents, feel little urge to keep up with neighbors, and feel little pressure to excel.

The Eels study points up the fact that our intelligence tests are geared to our middle-class culture; since we have seen that these tests have been formulated in terms of a definition of intelligence as "the ability to do abstract thinking," we are driven to admit the possibility that this definition, too, is colored by middle-class rather than working-class values. The need for rethinking, redefining, and reformulating in the field of intelligence testing is thus apparent.

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[11] Kenneth Eels *et al.*, *Intelligence and Cultural Differences.*

[12] *Ibid.*, p. 54.

[13] *Ibid.*, p. 265.

It should serve both as a caution and a challenge to the student of child development.

THE AGE OF INTELLECTUAL MATURITY

Intellectual maturity seems to be reached at about the same time as sexual maturity, but this fact is "an instance of concomitance rather than of causal relationship. Sexual maturity has no effect upon the mental growth of the individual." [14]

On the basis of his tests of abstract intelligence known as the CAVD test,[15] Thorndike reached the conclusion that the curve of growth in this sampling of intelligent behavior is parabolic in form, rising from zero at birth to a mid-value around the age of three and attaining full height at twenty-one.

It may seem a little startling that one-half of an individual's mental stature has been reached at the age of three. If so, the following exercise described by Florence Goodenough will be helpful:

> Get a clear picture in your mind of a newborn baby, considering its abilities and inabilities. Now think about the intelligent behavior of one of your adult friends. Now go back again to the baby and, keeping the baby and the adult as two points of reference, move slowly up the age scale, asking yourself at each point, "Is the typical child of this age more nearly like the adult or the newborn infant in respect to the things he is able to do?" Continue this process until you reach an age at which, in your judgment, the resemblances and differences are so evenly balanced that you can no longer come to a decision. If your judgment is sound, that age will fix the halfway point in postnatal mental growth.[16]

The fact that, in the original Stanford-Binet, adult mental age was tentatively placed at sixteen years of age and that the Terman-Merrill revision states [17] that "a mental age of fifteen years represents the norm for all subjects who are sixteen years of age or older" has mistakenly been thought to imply that mental growth ceases in early adolescence. Therefore, Goodenough suggests that, before trying her exercise just described, you "try to forget all that you may have learned about mental tests. Think only of children as you have known them." [18]

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[14] Wayne Dennis, "The Adolescent," in Leonard Carmichael (ed.), *Manual of Child Psychology*, p. 661.

[15] Sentence Completion, Arithmetic reasoning, Vocabulary, following Directions.

[16] Florence L. Goodenough, "The Measurement of Mental Growth in Childhood," in Carmichael (ed.), *op. cit.*, pp. 450–476.

[17] Terman and Merrill, *op. cit.*, p. 30.

Summary

Binet defined intelligence as "Comprehension, invention, direction, and censorship." The work of Binet, translated and revised by Terman, has set a pattern for most of the widely used intelligence tests which focus attention on abstract thinking and language ability. Thurstone and his associates, working upon the "factor analysis" of intelligent behavior, have collected much interesting data and stimulated further research in an effort to reach a more adequate definition of intelligence than just the ability to do abstract thinking.

The results of intelligence tests may be expressed in terms of the IQ, the MA, or the centile rank. Centile rank, arrived at by comparison with scores earned by his chronological age peers, is probably the most informative way of reporting the mental maturity of an individual child.

Accurate information concerning mental maturity is important for the school and useful in all sorts of counseling. However, it is important to remember that a mental maturity index is only *one* significant fact about an individual child.

Recent studies tend to confirm the suspicion that our most widely used intelligence tests are geared to the child from the high-economic-status home rather than to the children in families of lower income and that our very definition of intelligence expresses middle-class rather than working-class values.

Contrary to many people's opinion, mental maturity is not reached in early adolescence, but only by the age of twenty or thereabouts.

"Comprehension, invention, direction, and censorship" seem to this writer to define intelligence broadly and, therefore, to include most other definitions. We seem to need tests which draw upon these abilities in a wide variety of contexts, not merely, as at present, in language tests and abstract problems. However, it should always be remembered that a child's feeling about a test influences his performance; what this test means to him *right now* will affect both his effort and his competency.

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[18] Goodenough, *op. cit.,* p. 467.

CHAPTER VIII

Thinking and Communication

> . . . an individual born into any particular culture will think in terms of the medium of expression current in his society, and . . . the nature of his thinking will be affected thereby.
>
> OTTO KLINEBERG [1]

LANGUAGE AND THINKING

Everyone will agree that we use our native language when we think and that we "talk to ourselves," sometimes even aloud, when we have a knotty problem to consider. The psychologist Jean Piaget,[2] after studying the relation between children's thinking and their language development, wrote that "logical reasoning is an argument that we have with ourselves, and which reproduces internally the features of a real argument." Concepts, gestures, attitudes, images, and feelings are involved in thinking but, as a sociologist writes [3] in commenting on the activities involved in thought:

> All of them, whether basically verbal, visual, or emotional, have arisen in a context of social communication. Hence the form or processes of thinking, as well as its content, are greatly influenced by language.

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[1] Otto Klineberg, *Social Psychology*, p. 44.

[2] Jean Piaget *et al.*, *Judgment and Reasoning of the Child*, trans. by Marjorie Warden, p. 204.

[3] S. Stanfield Sargent, *Social Psychology*, p. 235.

John Dewey,[4] the great American philosopher, also considering thought and language as social-behavioral phenomena, and seeing them as inseparable in communication, wrote:

> . . . the heart of the language is not "expression" of something antecedent, much less expression of antecedent thought. It is communication, the establishment of cooperation in an activity in which there are partners, *and in which the activity of each is modified and regulated by partnership.*

A group of school children are arguing lustily about whether one of them has broken a rule of the game they have been playing. Each is shouting at the top of his lungs; no one is getting anywhere because no one is listening to anyone else, much as each wishes to be heard. One child, who is a leader, roars, "Shut up! Let's talk it over!" What this ten-year-old is really saying is, in the language of the psychologist, "Let's stop talking to ourselves out loud. Let's listen and be listened to!" In other words, "Let's communicate with each other!"

In a very real sense the most important job of the elementary school is to help children develop techniques of communication; the so-called language arts have a very large place in the curriculum. More significant still, the social studies are no longer restricted to a defined body of content to be learned or even to suggested "projects" to be undertaken; the actual process of socialization, through effective group participation, is a major concern in the program of the modern school. In guiding children's activities toward more effective group participation, the well-prepared teacher will have in mind the growth levels of the individual children with whom he is working. How great a command have these children of their mother tongue? How clear are their concepts, and how well do the words they use communicate these concepts to each other? How competently can they reflect upon a problem and share their conclusions with one another? The answers to these questions, of course, must be found by each teacher as he studies his particular group of eight- or ten- or twelve-year-olds, but, in this area, as in all others, there are general growth trends, the understanding of which is helpful in estimating the capabilities of particular children.

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[4] John Dewey, *Experience and Nature*, p. 179. Italics inserted.

The present chapter is concerned with how children enlarge and extend their concepts in terms of the language of their culture, how, and in what order, they acquire this language, and, finally, how they develop the ability to participate effectively in the circular process of reflective thinking and intelligible communication. In the interest of order and clarity, we must once more divide the subject into topics and shall now proceed to the discussion of spoken language and its development during childhood.

LANGUAGE DEVELOPMENT IN CHILDHOOD

The development of spoken language has been a subject of study by people interested in children's growth for a very long time. As a point of information, in 1899, a German scholar surveyed 199 titles for the German *Handbook on Education*.[5] It is easy to see why. Parents and other interested adults get a great thrill as they watch the rapid growth of vocabulary during the preschool years. The language of little children is generally quaint and charming when they have lived in homes where grown people speak simply and well. Good speech is most important for success in school as well as for social acceptance in middle-class communities. Language, while a tremendous topic, tempts the research worker because its vastness can be broken down into clear-cut problems. The undergraduate student of child development probably will not care to pursue all the ramifications represented by the 500 titles making up the bibliography appended to an article by Dorothea McCarthy that appeared in the *Manual of Child Psychology*. However, there are a few very important studies which one should know about if interested in the development of children, and the principal lines along which research in this field has been conducted will also be suitable information for the general reader.

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[5] Dorothea McCarthy, "Language Development in Children," in Leonard Carmichael (ed.), *Manual of Child Psychology*, pp. 476–582.

Some Very Significant Studies

The work of Jean Piaget in studying the thought processes of children as revealed in their language stimulated a great deal of further research activity directed toward understanding language development from the functional point of view. Piaget recorded the conversations of children in a Montessori school and classified the remarks under a number of categories. In going about this classification, he first divided his material into the remarks which were "egocentric," that is, the children making them were not interested in who heard the remarks nor in whether, for that matter, anyone was listening at all, and socialized speech. Everyone who knows little children can recall many "conversations" which were completely egocentric. As one example:

"What about the reason? What about the reason?" queried a little boy in nursery school.

"What reason?" asked the student teacher helpfully.

"Strawberries!" replied the youngster.

Probably no one will be surprised to discover that Piaget found a great many instances of egocentric conversations among the younger children he studied. Reporting on 1,500 remarks, he found 38 per cent to be egocentric, 45 per cent spontaneous socialized speech directed toward listeners, and 17 per cent answers to questions, which, of course, were instances of socialized speech. When he analyzed the data according to the ages of the children who contributed remarks, Piaget found that, according to his records, the percentage of egocentric speech decreased with the age of his subjects.

McCarthy [6] made a study of the language of preschool children which was remarkable for its precision and care in contrast to the casual methods used by Piaget. Whereas the analysis of 1,500 remarks was based by Piaget on the recorded conversation of two six-and-a-half-year-old children, McCarthy analyzed 50 consecutive remarks from each of 140 children from 18 months to 54 months old. Each age group was represented by 20 subjects, and they were selected so that no child varied more than 15 days in either direction from his classification. That is, in the 18 months group, the actual range was from 17 months 15 days to 18 months 15 days. And so on for each age group. McCarthy was also careful to get a representative sampling of the entire population of the city in which she worked. This she did on the basis of parental occupation; the percentages of professional people and unskilled laborers in the total population were reflected in her choice of subjects; the children of parents in the managerial class and other classifications of the scale McCarthy used were chosen in the same way. When she analyzed her data from the point of view of function, she found a much smaller percentage of egocentric responses than Piaget had reported for his subjects, as have other American investigators who followed her general procedure. McCarthy herself states [7] that only investigators who really set out to look for egocentrism find it in a percentage agreeing rather closely with that reported by Piaget.

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[6] Dorothea McCarthy, *The Language Development of the Preschool Child.*

McCarthy's comprehensive study included quantitative measures of children's language, the amount and rate of talking (in her study the range of time required by individual children to produce 50 responses was from 7 to 50 minutes). Length of sentence, sentence structure, and grammatical form were also carefully tabulated. The relation of language development to other growth trends and the effect of different environmental factors have been analyzed by this leading authority on language in several of her publications. The student interested in language development as a special topic should consult these sources. Meanwhile, a few of McCarthy's important conclusions will be summarized here.

Vocabulary, mean length of sentence, and logical complexity of sentence structure increase with age. Language development was shown in McCarthy's study as related to social status; children in the upper socioeconomic groups tend to be accelerated in their language ability. Only 10 per cent of her cases were bilingual, and, therefore, McCarthy offered no conclusions concerning the effect on language development of a bilingual background.

Medorah Smith standardized a much-needed vocabulary study for preschool children in 1926[8] and has contributed steadily to the field of language development research. One of her most significant publications is a contribution to the study of bilingualism made in Hawaii. Smith studied 1,000 children of varying racial backgrounds and degrees of bilingualism.

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[7] Dorothea McCarthy, "Language Development in Children," in Carmichael (ed.), *op. cit.*, p. 535.

> In general, it was found that the children of Hawaii from non-*haole*[9] homes are retarded in language development to a degree so marked that, on most criteria, they are at about the level of three-year-old children from a less polyglot environment at the time of school entrance. Smith considers that this retardation is due to the bilingualism of many homes and the prevalent use of pidgin English in the Hawaiian Islands.[10]

Commenting on Smith's findings, McCarthy[11] writes:

> There is need for further study of bilingualism in the United States with other languages as the foreign language and uncomplicated by the presence of a mutilated form of English. Most of the studies are seriously obscured by the factor of socio-economic status, for most bilingual children either come from highly cultured homes of the upper social levels where the language is being deliberately preserved for cultural reasons, or they come from the lower socio-economic levels where the parents have not been sufficiently intellectual to acquire the second language.

Some Tentative Conclusions

A survey of the literature in the field shows a swing toward the psychological and behavioral study of language in keeping with the growing realization that language is a means through which the individual adapts himself to his culture rather than a structured way of expressing "antecedent thought." Acceptance of the organismic approach to the study of behavior commits the research worker in the specialized field of language development to the investigation of the interrelations of this with all other aspects of growth. Environmental factors such as socioeconomic status, position in the family, *i.e.* first, middle, or youngest child, twin or singleton, have been shown by McCarthy, Smith, and others to have significant bearing upon language status. There is evidence to show that parental education, affecting as it does the kind of speech standards prevailing in the home, is an important factor in language progress. Certainly, emotional tensions caused by faulty interpersonal relations or traumatic experiences to which the child was unavoidably subjected may affect speech development very seriously.

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[8] *Ibid.*, p. 565.

[9] *Haole* is "an Hawaiian word used to apply to almost all Caucasians except the Portuguese."

[10] *Ibid.*

[11] *Ibid.*, p. 566.

Phyllis Blanchard, a pioneer in the field of play therapy,[12] has reported upon a number of such cases. In some individuals referred to a child guidance clinic, speech had regressed to infantile patterns, although the children had previously reached a satisfactory speech level; in others, speech development was severely retarded; in a few instances, children have been known to withdraw to the extent of refusing to speak at all. Blanchard and others have been able to note marked improvement in language status incident to generally improved adjustment in the course of play therapy.

There is available for the serious student of the subject a wealth of research publications on language development, making it possible to study this particular developmental trend within the framework of the organismic pattern, or, otherwise stated, in relation to the development of the total personality.

Growth in the Power to Think Effectively

Alive and awake, some form of thinking is continually going on in the experience of every healthy human being. Mere idle reverie, building "castles in Spain," pulling down the blind of the south window when the summer sun strikes your room, rolling over on your back for a lazy float when a long "crawl" becomes tiring, figuring out how to earn the money for a new dress you feel you need, all require the use of concepts formed with the aid of one's particular culture and may be generally classified as "thinking."

John Dewey's monograph *How We Think* is an educational classic which is rich in suggestion for the student of child development. "In its loosest sense," Dewey wrote, "thinking signifies everything that, as we say, is 'in our heads' or that 'goes through our minds.'"[13] Reverie or the building of air castles falls into this category. Reflective thought, a competency which we very much want to help children develop, is consecutive. The other instances mentioned in the last paragraph: closing the blind, relaxing into a float, and, obviously, the planning of a campaign to raise money, therefore, employ reflective thinking, albeit on different levels.

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[12] In her work at the Child Guidance Clinic at Philadelphia.

Dewey indicated that all types of thinking have a common element; they go on beyond that which is directly observed and suggest something not included in immediate perception. An illustration given in *How We Think*[14] is the following:

> A man is walking on a warm day. The sky was clear when he last observed it; but presently he notes . . . that the air is cooler. It occurs to him that it is probably going to rain; looking up, he sees a dark cloud between him and the sun, and he then quickens his steps. . . .
>
> So far there is the same sort of situation as when one looking at a cloud is reminded of a human figure and face. Thinking in both of these cases involves a noted or perceived fact, followed by something else, which is not *observed*, but which is brought to mind, suggested by the thing seen.

However, the resemblance between the passing thought that a cloud formation resembles a human face or form and the reflection that it might be going to rain and that, accordingly, it would be well to hurry ends here.

> We do not *believe* in the face suggested by the cloud; we do not consider at all the probability of its being a fact. There is no *reflective* thought. The danger of rain, on the contrary, presents itself to us as a *genuine possibility*—as a possible fact of the same nature as the observed coolness. . . . In the first case, seeing an object, we just happen, as we say, to think of something else; in the second, we consider the possibility and nature of the connection between the object seen and the object suggested. The thing seen . . . possesses the quality of evidence.[15]

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[13] John Dewey, *How We Think*, p. 2.

[14] *Ibid.*, pp. 6–7. Italics inserted.

[15] *Ibid.*

Young children, especially very bright young children, pour forth imaginative stories which give evidence of the first type of thinking. They also solve simple problems like the one faced by the man who decided it was going to rain, especially if they have been allowed to learn by experience and have therefore a good store of meanings, such as that clouds may mean rain. However, the imagination of the child in the early school grades, if not riotously unchecked, is still very vivid, especially, as has been said, if he is bright. Probably in our culture this young school child is less egocentric, on the average, than Piaget's subjects, but he is still very easily carried away with his own fancy and his own strong desire to have reality conform to what he wishes it to be. This fact about children accounts for the eagerness with which many of them accept misinformation about sex phenomena; the fantastic explanation is more directly "up their alley" than the prosaic factual account.

In the guidance of children toward mature thinking, two things are important: first, that creative imagination be encouraged and cultivated; second, that this imagination be enlisted in the solution of realistic problems in the world of everyday living. The fanciful constructs of a vivid imagination are delightful and many times give pleasure alike to the one who creates them and to his friends. But this same creative imagination must be enlisted in practical, logical constructs as well as in fantasy. The enlistment is effected as the child encounters and solves problems significant and important to him.

In the healthy child, vivid imaginings are joined to lively interest in the world about him. The elementary school child is experience-hungry; he will watch turtles or butterflies, play with a magnet or a battery set, even watch the teacher perform a simple "experiment" with great eagerness. His ability to reason competently is conditioned by the range of his experiences and by the degree to which these experiences challenge him to reflect upon them. A favorite exhortation of the not-so-competent teacher is "Now think, children. *Think.*" This encouragement frequently falls flat because: (1) the children haven't the facts needed to answer the question posed to them; (2) they don't see that there is any problem and therefore can't appreciate that the question has any point; and/or (3) they have so seldom been asked questions which they could answer on the basis of fact that they haven't developed the ability to reason carefully. The whole thing, unfortunately, is "in the teacher's head" or "going through *her* mind" as far as the bored and bewildered class is concerned.

It is certain that bright, wholesome children, given any freedom at all, will learn to think reflectively and solve their problems in the course of their own undirected experience; but, since it is very important, not only for these children themselves but for their society, that they learn to think as often and as competently as possible on a wide variety of subjects, it is important that their elders give them as much help and incentive as possible. The experiences which engage their attention and interest are clearly the starting point, and, from our knowledge of children and of the nature of reflective thinking, some helpful suggestions for guidance may be formulated.

According to John Dewey, upon whose monograph *How We Think* [16] we have already drawn, the "steps" in a complete act of thought are five:

1. A felt difficulty.
2. Its location and definition.
3. Suggestion of a possible solution.
4. Development by reasoning of the bearings of the suggestions and the selection of one as a working hypothesis.
5. Further observation and experiment leading to acceptance or rejection; that is, the conclusion of belief or disbelief in the working hypothesis.

Let us see how nearly one eleven-year-old girl followed these theoretical steps in the solution of what was to her an urgent problem. Susan has decided that she simply must have a new dress for a class "open-house" party for parents and friends. There is to be an exhibit of art work and other class products, and Susan is to be one of the hostesses. Susan is a member of a family in which finances and other matters affecting everyone are discussed fully and openly with all the members. So Susan takes it up with the family. When Susan, her sister, her two brothers, and their parents have all had their say, a consensus is reached to the effect that the family budget cannot take it this month. Susan has saved some of her allowance, but it is pointed out in the discussion that she will need most of her savings to get to camp next summer. Susan, it will be apparent, with the help of her family has located and defined her problem. Susan thinks the matter over. A suggestion occurs to her. She gets on the telephone. In two evenings of prospecting, she rounds up enough baby-sitting, dishwashing, and other odd jobs to get the money she needs for the dress. She answers a question or two in her own mind. Can she get her homework done if she takes on this extra responsibility? Certainly, if she cuts her after-school playtime. Can she be happy and cheerful with her play activities cut down? Sure she can, for three weeks! Susan does her jobs, collects her pay, buys her dress. The problem is solved to her complete satisfaction.

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[16] *Ibid.*, p. 72.

Susan's problem was real, important, and within her capacity to solve. Into her solution went discussion, planning, hard work industriously and skillfully performed. Little demand was made upon her ability in formal school work beyond basic arithmetic, competently applied; considerable demand was made upon her public relations. Not every little girl can round up and carry through several odd jobs at the drop of a hat! Neither are too many girls of Susan's age sufficiently resourceful and independent to put through an undertaking such as hers. These important traits are well developed in Susan as a result of living for eleven years in a loyal, supporting, and at the same time challenging family circle.

It is unrealistic to think that a whole school curriculum can be built around problems as real and vital to all students as was Susan's dress dilemma to her; but teachers who understand the needs of growing boys and girls can inject at least a measure of reality and vitality into their classroom methods. It is also untrue to fact to think that children less well endowed physically, mentally, and emotionally than Susan will immediately, or even without considerable encouragement, take on problems as she took on the one just described. But the old saying, "We learn to do by doing," holds in problem-solving behavior or reflective thinking as in all other sorts: we learn to solve problems by solving them; we learn to reason clearly and carefully by practicing reflection.

The first task of the adult who wants to help an individual or group of children learn to solve problems through solving them is to determine what level of difficulty in problem solving is suitable in a given instance. Other things being equal, the difficulty of a problem is determined by the degree of abstraction and the special skills involved, as well as by the length of time effort must be sustained. School children differ greatly in their capacity for abstract thinking because they differ in what we call intelligence, in experience, and in emotional stability. They differ greatly, too, in their ability to suspend judgment or to wait for an appreciable time in order to see the result of effort. Our capable Susan herself could not have solved a problem requiring the use of logarithms; probably three weeks of strenuous effort were about enough for her without sacrificing her cheerful spirit or her homework. A girl of eleven whose store of meanings was impoverished and who, therefore, could not think up ways of approaching people graciously could not succeed in an undertaking involving initial interviews and continued "getting on" with a number of people, even though she could grasp the arithmetic involved in earning enough money to buy a dress. Concepts concerning how prospective employers behave, how a baby-sitter gets herself accepted, how people like a temporary helper to behave in their pantries, were all required in Susan's undertaking. Many eleven-year-olds have had far too meager experience to possess these concepts.

The leader of a group of school children assesses the capabilities of the individuals in it and, if he hopes to develop the thinking capacity of each child, sees to it that a variety of problems, ranging from the more abstract to the quite concrete, arises in the course of their class activities. When, and only when, an individual or a group sees a problem or feels a difficulty, does the adult in charge encourage the pursuit of the problem and support the pupil's efforts to reach a solution. This is the difference between real, honest experience on the part of the class and the artificial sort, only too common even now, in which no one sees the problem except the teacher and everyone drags through the teacher-directed steps

Love

Love, or a warm, positive feeling toward one's family, one's friends and associates, and, in general, one's world, is rooted in a basic feeling of security, competence, and "belongingness," resulting in a healthy love of oneself. Karen Horney and other psychiatrists have demonstrated that one cannot love others unless one first loves oneself. The healthy preschool baby has moments of smug self-satisfaction, like that of Little Jack Horner, who

> . . . sat in a corner, eating his Christmas pie.
> He put in his thumb
> And pulled out a plum
> And said, "What a good boy am I!"

Or he has the confidence of one little David in a nursery group of many years ago. David was three, well developed nutritionally, not too skillful in managing his body because of too constant servicing by mother, nurse, and grandmother, which had made much self-help unnecessary. But David, as secure as they make them, took nursery school in his stride. He became very devoted to Alice, moody, rather unhappy, athletic, and all of five. David pursued Alice gently but persistently, putting his arms around her and saying, "I *love* you."

Alice usually replied, "Go *a*way. I *don't* love you!"

To which David quietly responded, "*No?* And David's such a *nice* boy," and went his happy way.

The school child, finding himself a successful member of a working group, strengthens his self-love and self-respect and is able to extend himself increasingly to others beyond the family in whom his self-acceptance was first developed. He loves his world as a whole, his school, and his playmates collectively. He has a few preferred "pals" in whose companionship he feels especially secure and accepted. In the same way, he frequently loves his teacher, as a person who helps him along, who is fair and friendly, and who thinks up interesting things for the group to do.

On the whole, however, he is *not* ready to identify. It is difficult or impossible for him to feel real sympathy, in the full sense of the word, although sympathy begins to dawn for those who suffer in a way in which he himself has suffered: toothache, stomach-ache, a bad gash in the knee, being sick and not able to go to a party. With a few tactful pointers, this school child needs to be permitted to go about his own business in extending the range of his love and the breadth of his sympathy. Adult interpretations of how another feels should be brief and realistic; no tear-jerking techniques elaborating on how David suffered when Ted inadvertently knocked him down the steps are in order. Even if Ted is a hostile child and pushed David down "on purpose," his emotional growth will be hindered rather than hastened by high-pressure attempts to make him identify with another person when the power to identify is simply not present in Ted nor in most people of his nine-year-old level.

According to Erikson's analysis[5] of developmental stages, which he calls the "Eight Stages of Man," typical elementary school children develop a high degree of industry in which they take delight and through which their self-acceptance and self-confidence are strengthened. Correspondingly, through cooperative efforts, they improve their ability to accept and appreciate their peers as fellow workers. With the coming of pubescence, another goal comes into focus, that of identification. It is accompanied by new threats to self-love and security and by a greater sensitivity to others evidenced in the growing ability to identify with fellow men. Although the pubescent has many new adjustments to make, he has growing emotional power to meet his world; he has the sympathy which was not yet developed in his prepubescent stage of growth.

Joy and Delight

The nostalgic sentimentalizing about "the happy childhood days of knight and fairy" so popular fifty years ago is not for the scientific student of child development. Childhood, we now see, may be devastatingly unhappy, and the unhappiness, upon occasions, even of the well-adjusted child, is very deep and painful. It is hard for school children to project much in advance of the present moment, and their emotional reactions are usually intense. Although their emotions show evidence of grading in middle and later childhood, toward its solution. In the first instance, there is invaluable experience in reflective thinking and consequent growth in the power to think sharply and effectively; in the second, pupils experience nothing except the exercise of following an adult's directions plus probable boredom. The satisfaction of clinching a solution is not theirs.

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[5] Erikson, *op. cit.*, pp. 219–234.

Growth in the power to think reflectively is shown by the power to solve progressively more complicated and more abstract problems, by the tendency to bring clear concepts already formed through past experiences to bear upon a present difficulty. Mentally less alert children, inhibited children, inarticulate children, progress but slowly and require a great deal of encouragement in working through very simple problems in which the elements are quite concrete.

COMMUNICATION

Communication brings about what Dewey called "the miracle of shared experience"; it is the means of creating and preserving cultures and of developing the lonely, threatened biological individual into a secure, confident personality. The beginnings of communication lie far back in the earliest contact of the infant with his parents, more especially with his mother. The adult holds the baby securely; the baby reacts by accommodating its posture to the supporting arm. Thus the baby and his parents reciprocate and in so doing begin to communicate in a very primitive fashion. The mother sings to the baby, talks to the baby, responds delightedly to the baby's sounds, and the communication lines between the two take on both strength and variety. Presently, as we have seen, language enters in; the adult responds to the baby's sounds and selects some of them for special attention and practice. So the baby begins to develop the vocabulary of his culture, not only the actual words, but the *meanings* which these mere sounds carry. He uses his vocabulary to share his experiences—of pleasure or pain or interest—with the people around him. The people around him respond with warmth and understanding. The young child's power to communicate grows; he wants to be both understood and appreciated.

In a secure home environment these needs are satisfied, for every effort to express the self, that is, to communicate, is appreciated. Intelligent adults do not "talk down" to the youngest ones but meet them squarely on a simple direct basis; where this is the case, the youngest ones progress, their concepts are clear, they understand the meaning of the words they use, they know how to share in the social process of communication. When adults are short of time or sympathy or understanding, the power to communicate develops less rapidly; concepts are hazy because they are not clarified through sharing. Indeed, even when preschool experiences have been varied and wholesome, young school entrants bring with them to their "formal" education some very hazy concepts, which the modern school attempts to clarify by means of planned experiences in which discussion, sharing, play a very large part.

The school child communicates not only verbally but through drawing and painting and clay modeling and through any number of activities by means of which he "projects" himself into his culture, using his unique, individual forms of expression. He also learns to communicate using the culturally determined forms of grammatically correct language structure, correct spelling and punctuation, proper diction. He learns how to understand and appreciate the vicarious communications of others through reading. He learns how to conduct a meeting and how to behave as a member of a discussion group. In brief, during his school career, he will more or less master the conventions of communication; he will correct his individually formed concepts in the light of group concepts; he will pattern, and sometimes far too readily, his individual ways of expressing himself upon the group patterns.

It is for the teacher and the school to determine in individual cases how far the original and unique form of expression must defer to the conventionally correct. Concretely, how long should Mary be permitted to express herself in original writing meaningful and interesting to the group without being exhorted to be less original in her spelling? Is paragraphing as important as, or more important than, the forceful expression of ideas? The author has often found it difficult to make decisions in these matters but finds help in looking at them from the standpoint of communication as the common end of all expression. If Mary's spelling is so original that only she herself can read what she has written, if John's writing is so poor that he can't read it himself, if lack of organization and topical order makes Susan's arguments a shambles in spite of her brilliance, then form needs strenuous attention to make communication full and free. It is time to help the young people develop a "conscience" in these matters, to borrow an apt expression from Gertrude Hildreth,[17] to assure accuracy and clarity in the crucial human endeavor to share experience.

SUMMARY

The child forms his concepts in terms of the language of his culture; his thinking, which is behavioristically described as subvocal talking, naturally goes on in his mother tongue.

Language and thought are involved in the process of communication, which is carried on concurrently, and which is the means of sharing one's experience with one's fellow men. This shared experience builds the very culture itself and develops isolated biological individuals to the stature of socially competent personalities. The sharing of experience through communication entails the mastering by the individual of the forms of expression understood by the members of his group. These forms include some fluency in speaking, the ability to understand symbols and thus avail oneself of the ideas communicated through the written word, the ability to use symbols, thus expressing oneself in written form, and the ability to spell, punctuate, and organize written material so that it is intelligible to others. The teaching of the language arts has the development of these competencies as its objective.

Thinking is carried on at different levels ranging from idle reverie to serious reflection. It is a main objective of the school to encourage reflective thinking at the highest level of which each pupil is capable. True reflection begins when a genuine problem is encountered in the course of an individual's experience. After the problem is located and defined, suggestions arise as to how it may be solved. Other things being equal, more suggestions will arise in the minds of the more intelligent and, also, less inhibited pupils. These suggestions are tested out in thinking; one is selected for overt trying out. The suggestion is then "believed in" or declared false on the basis of success or failure in the solution of the original problem.

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[17] Gertrude Hildreth, *Learning the Three R's.*

The role of the teacher or other adult who is guiding children in the process of thinking is, first of all, to see to it that they are confronted with genuine problems within their capacity to solve. For a class group, problems should be of a number and variety such that every pupil is interested in engaging in reflective thinking. Pupils need encouragement and support in the understanding and solving of problems.

Thoughts and feelings are communicated through other than language arts with vast individual differences in the effectiveness of the communication. The modern school encourages the "expressive arts": painting, drawing, music, the dance, ceramics, and every conceivable form of conveying the self to the other members of the culture.

John Dewey wrote [18] concerning communication:

> . . . when the emotional force, the mystic force one might say, of communication, of the miracle of shared life and shared experience is spontaneously felt, the hardness and crudeness of contemporary life will be bathed in the light that never was on sea or land.

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[18] John Dewey, *Reconstruction in Philosophy*, p. 211.

CHAPTER IX

Trends in Emotional and Social Behavior

> With the oncoming latency period, the normally advanced child forgets, or rather sublimates, the necessity to "make" people by direct attack . . . he now learns to win recognition by producing things. . . . He can become an eager and absorbed unit of a productive situation. To bring a productive situation to completion is an aim which gradually supersedes the whims and wishes of his autonomous organism.
>
> ERIK HOMBURGER ERIKSON[1]

THE NEEDS OF THE SCHOOL CHILD

As the school years pass, the child who is "normally advanced" becomes less and less possessive of his parents' attention and affection and increasingly competent to make his own way and to get the approbation he needs from the results of his own efforts. This approbation must come from his family and his teacher as well if he is to feel secure and at home in his world, but, above all, he must win the respect and regard of his peers. The older child also needs a widening area of freedom in exploring the environment by expeditions on his own or accompanied by friends his own age rather than by being always shepherded by adults. Shorter and longer camping trips accompanied by sympathetic young leaders are of further help in filling the need for adventure and for independence from constant home guidance. Children whose needs are met in these ways are, incidentally, fine companions for their parents when a family trip or camping project is planned; they enjoy their parents' companionship without making the exhausting bids for attention and acceptance so familiar and sometimes so exasperating in children who are *not* normally advanced.

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[1] Erik Homburger Erikson, *Childhood and Society*, pp. 226*f*.

Realistic ideas about money are important for the school child; the family budget should be understood and respected, in which case restrictions on allowance and extra expenditures are accepted instead of becoming the subject of "gripes." In developing this desirable realism, decisions have to be made about what an "allowance" represents and also under what circumstances the child of eight or nine or ten should be encouraged to "earn" money. An allowance is a share in the family income which is the child's own to save, yes, but above all to *spend* wisely. Sometimes adults, in their eagerness to stress thrift through saving, forget about thrifty buying and planning as important habits to be learned. Responsibility for paying small expenses, Red Cross money, church collection, bus fare, should be included in the allowance arrangement. Children need help and some supervision, especially when parents believe that allowances should be increased rapidly and responsibilities for buying clothing and other personal supplies increased proportionately. Guidance is important in the interest both of family thrift and of child learning. But there should, perhaps, always be a strictly private portion of the allowance to spend or to save with wisdom or foolishness. One does not wish to create tensions in connection with learning how to use money. As Robert Frost has brightly expressed it,

Never ask of money spent
Where the spender thinks it went.
Nobody was ever meant
To remember or invent
What he did with every cent.[1a]

[1a] *Collected Works of Robert Frost.*

Allowances are not earned; they are given as a part of the child's education in spending and saving. Extra money, often needed and always welcome, may be earned, and the satisfaction of earning fills the child's need to see himself as an independent worker and producer, a very real need in later childhood. On the other hand, it does not seem to this writer that home jobs should be done "for pay," unless the circumstances are such that the child is actually taking over someone else's responsibility or is doing work for which the neighbor's big boy or girl would have to be paid. Keeping the household going smoothly is everybody's job and to everybody's interest; nobody needs any pay beyond the satisfaction of a home where you like to bring your friends. However, if Sandra has a date and would like kid sister, let's say aged ten, to take over her job of dish washing after a family party, sister might well be paid—at a fair rate—for competent dish washing. This seems to be most important, this fair pay for good work, both in the home and out. If cutting the grass is not one of Junior's regular household jobs because, when added to his school work, Junior has all he should be asked to do, then a Saturday morning spent mowing the lawn and generally tidying up the place is worth money, the same money that would be paid to sixteen-year-old Jim across the street who has worked up a business for himself as a handy man.

The school child, especially as he approaches pubescence, needs to participate in group activity other than that of the family or school. The club, the scout group, the church group, the crafts class at the social settlement, fill this need and support the child in his business of growing up to the degree that they are wholesome, well-conducted groups. A wholesome group shares a variety of worth-while interests and is inclusive in its contacts with other groups. In this case, the child's sense of belonging is satisfied through membership, while the negative tendency to exclude the "outsider," which all normal boys and girls show at some point in their development, is tempered by their experiences as hosts to or guests of other groups in various shared experiences and events. As secure, accepted members of "in" groups, children may learn the wisdom in a verse entitled "Outwitted":[2]

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[2] Edwin Markham, in *Modern American Poetry.*

He drew a circle and left me out—
Heretic, rebel, a thing to flout.
But Love and I had the wit to win:
We drew a circle that took him in.

This wisdom makes of them well-adjusted young people, confident, generous, and socially competent.

Growing boys and girls need increasing responsibility in carrying through assigned or assumed tasks in the interests of others: errands for the family involving transactions with money or delivering messages or specifications, taking the youngest ones to kindergarten or nursery school, baby-tending at home and abroad —but very small doses of home baby-sitting unless the child shows real enthusiasm. (Junior and ten-year-old "Sis" easily develop gripes about being stuck with the baby. For one thing, it is a fashionable gripe in their age set as a rule.) The modern school provides many opportunities for taking responsibility, in group planning in the classroom, in school government, in helping the librarian, or in doing responsible jobs in the school office. All these activities build the sense of competence, the delight of being "an eager and absorbed unit of a productive situation," as Erikson puts it.

THE EMOTIONAL CHARACTERISTICS OF THE SCHOOL CHILD

The normally advanced school child is less emotional, in the sense of explosively expressive of his feelings, than the preschool child or adolescent. The turbulent days of finding his place in the family group and making basic adjustments are over for the average child. There will be another upheaval at puberty, but, for the moment, there is calm, and one gets the impression from the books and from observation that the "maturity of childhood" finds the young persons quite "tough-minded," to borrow an expression from way back in William James's writings. In addition, there is powerful pressure, especially from the peer group, in the direction of controlling emotional behavior. Parents, teachers, and other adults reinforce this pressure for reasons of their own. Indeed, it is possible that "self-control" is a little overstressed, especially in the case of the younger school child, and that adults do not make enough allowance for the children who are *not* normally advanced and cannot become so "by five this afternoon." Regardless of any individual's normal poise, fear, anger, and jealousy are potential explosives which may temporarily wreck the normal course of development. Conversely, love, delight, a buoyant *joie de vivre,* cultivated and expressed, speed the growing child on his way toward maturity. Some of the situations giving rise to these emotions, while not peculiar to the school-age period of growth, are generally characteristic of it.

Fear

The more secure the individual, the fewer and the less intense his fears at any given age level; but, in comparing age levels, we find that the number of fears increases generally in the late preschool and early school years because the child knows more reasons to be afraid as he extends his range of concepts. There is also an extension of the number of fears during adolescence beyond the usual range of childhood fears, which again decreases in normal or average adulthood.

There are also qualitative changes in fears as the child grows up. In early childhood, he is afraid of the dark or of strange, strident noises or of dogs or of some object which has been associated with the dark and the strange, such as the configuration of things in his room as he wakes in the half-light of the room illumined by chinks from the street or the corridor. The young child, on the whole, is scared by the here and now. The school child projects his fears beyond the present, in addition to being afraid of some present stimuli. Thunderstorms, the wail of fire sirens, the air-raid warning are immediate stimulants of fear in many children. A poor report card, with the resulting displeasure of parents and teacher, can be the subject of dread for at least days in advance. Fear that his parents will die or that he will die himself, usually following experience in connection with the death of a playmate or relative, is also common among normal school children. Irrational fears of ghosts, witches, and the like, decrease with age, and a current study of them would probably show a smaller incidence for any age group than was the case a generation ago. On the other hand, it is probable that fears of atom bombs, germ warfare, and "men from Mars" are on the increase.

It is unfortunate that being a " 'fraid cat" or a "sissy" is such a devastating disgrace with the young school set, for frank discussion of fears is an important way of reducing them. This is a situation in which children need help from a sympathetic adult in the form of reassurance, rational discussion, and some protection from the harshness of the peer group. With tactful guidance, a healthy, vigorous nine-year-old may get to the point of saying, "Well, I *am* afraid of lightning. So what?" This is, of course, a triumph which is bound to increase courage all around in the personality of the child who can achieve it. Since many of the taunting peers have plenty of fears themselves, it is a fine experience for the group to have somebody come out and own up to one. Unfortunately, the situation that leads to earning the sad epithet sissy is usually one in which the terrified child has screamed or cowered or actually run away, thus violating his group's code on the subject of controlling emotional expression. This has to be lived down; the skillful adult leader can do a good job of helping by stimulating group discussion or initiating a "sociodrama"[3] to help individuals work through their feelings, their own fears, as well as their feelings toward others who show fear.

Discussion and, in addition, learning how to tackle fear overtly by taking safety measures are the best means of reducing terror in the case of children and adults alike. From the author's observation, sanely conducted safety drills are a means of reducing fears through dramatizing a terrifying situation. The attitude of the adults conducting these activities is of prime importance; one must be not only calm and poised but also free from ponderous solemnity. It is also important to avoid gratuitous stimuli to fear, such as the use of horrible imaginative stories in the literature presented to children. Many of the fairy tales and folk tales which were once regarded as the child's proper introduction to great literature are now recognized as unsuitable for him until he is firmly grounded in the realities of his culture. The products of the racial unconscious, folk and fairy tales have the power to arouse primitive fears and to reinforce unwholesome feelings. This is especially true in the case of the younger school children. Normal boys and girls of eight and nine and ten can begin to enjoy excursions into the unreality of fairyland because they are sure enough of where their own real world lies to be able to return to it at will. It is believed by some authorities that the vicarious enjoyment of savage revenge on stepmothers and the like helps draw off surplus aggressiveness and hostility, thus furthering wholesome adjustment in older school children.

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[3] A technique to be discussed later in this chapter. See Caroline Tryon, "Fostering Mental Health in Our Schools."

Anger

Outbursts of anger due to a sense of injustice or unfairness or just to stupid thwarting of an individual's purposes are common among school children. Normally, they are brief, and, especially among girls, they take the form of verbal abuse rather than physical attack after the first grade. This "preference" for verbal retaliation is probably the result almost exclusively of social pressure exerted by school and community authorities as well as by families. The ill-adjusted child finds it difficult or impossible to respond to this pressure and often adds to his own troubles by "fighting." In the light of what we know about children and their drive toward somatic activity in every situation and what we know about the danger of repressing emotions, it might be well to relax this adult pressure and sponsor a few more fair fights. The realistic danger of injury to pupils while under the jurisdiction of the school seems the one plausible reason to continue to try to civilize children's anger reactions.

In normally adjusted school children, anger outbursts are brief; they are quickly spent after release through vituperation, insult, refusing to allow the offender to play, or physical encounter. Moods, or protracted emotional states, are not usual reactions among healthy children during this prepubescent period. When a child is moody, the condition generally presages illness or warns that basic adjustments are, for some reason, unstable. Tantrums, and this term requires no special elaboration, are very rare among healthy prepubescents; when, through some combination of circumstances, like imminent mumps or chickenpox, plus frustration at the family breakfast table, they do occur, they are usually followed by shame and generally negative feelings toward the self.

It is important to continue with the school child the education about anger which should have begun in the nursery: (1) everybody gets angry, this we all understand; but (2) we may not show our anger in savage, damaging ways, like dangerous physical attack and unbridled verbal bludgeoning; hardest of all, (3) it is right to be angry because of some of the things other people say and do, but we should not be angry with the person. The last is a principle which even adults find it difficult to put into practice. Again, as in dealing with fear, acting situations out in the sociodrama is often helpful, especially in driving home the distinction between the doer and the stupid or malevolent deed.

Jealousy

Jealousy is defined by Hurlock [4] and other child psychologists as a form of anger. It is a particularly devastating, painful, and dangerous form for the individuals who suffer from it and also for the people around who must endure the behavior of the jealous persons. As we saw in an earlier discussion, jealousy has its roots in very early childhood, even in infantile experiences. The baby cannot bear to share his parents' affection, even to the extent of witnessing their affection for one another. The older baby cannot accept the sibling without some degree of suffering. The love needs of the very young are too intense and devouring to permit of rivalry without hostility. Unfortunately, the home, the school, and the community at large tend to foster hostility aroused through rivalry by the far too extensive use of competition as a stimulus to effort. John wants desperately to get recognition for his honest efforts at school, but sister Mary always comes home with a report resplendent with A's, making his hard-earned B average a dim success. Ellen has competed with high-powered Susan for five years of their school association. Ellen has a fine mind and is a good scholar, but she always comes in second. Recently, in an interschool spelling contest, Susan won the medal offered to the best speller. Ellen received honorable mention. Ellen is a conscientious child and has considerable insight into her difficulty, but she suffers and frequently shows what she is going through by doing what the teacher calls "mean little things" to Susan and other playmates. In repose, her face often looks like a thundercloud.

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[4] Elizabeth B. Hurlock, *Adolescent Development.*

Modern schools are everywhere taking action against the evil effects of stimulated rivalry and competition through the use of descriptive methods of reporting progress, which compare the child as he is today with what he was three months ago, thus, as it were, pitting him against himself. Reports are also based on the child's honest efforts, so far as the school is able to appraise these, rather than on his comparative standing in the group. But not all schools are modern in this respect; there are still junior high school classes in which students are seated according to their IQs, with the high-IQ pupils in the front of the room. Many elementary school teachers still seat their brightest children in front and their dullest in the most remote corner. In still other classes, front seats are earned by the pupils' achievement; they move forward or back each week according to their standing. Even in "modern schools" with faculty trained in "progressive" methods, individual teachers will be found who pit pupils against each other incessantly and justify their procedure by the explanation, "These children live in a competitive society" or "Children love competition."

The two rationalizations just mentioned are worthy of study for the elements of truth they include. To take the second one first, children and adults both like many things that are not good for them. (Hence, the gloomy dictum that all nice things are wicked, expensive, or fattening.) Admittedly, it is fun to compete; probably, all normal people enjoy competing in some fashion, and children should not be denied this normal pleasure. It therefore becomes the job of the home, school, and community to further wholesome competition and discourage unwholesome forms. A few guiding suggestions are the following:

1. Keep the emphasis on the child's competition with himself, so far as possible. For instance, "You certainly do get ready for school better than you did when school started. And you look nicer, too, with less help," rather than "You were quicker this morning. Maybe you can get ahead of Sister tomorrow." Or, "Much better, John,

don't you think? Look at last week's paper. Your spelling and punctuation are just about perfect this time. Only the paragraphing needs more hard work," instead of "John, that composition was much better. It comes almost as high on the composition scale as Frederick's."

2. Think up ways of motivating children other than relay races in arithmetic computation, the amassment of gold stars, and other trivialities.

3. Do all you can to hasten the day when the youngsters are as thrilled by their group's record in comparison with other groups as they are by their personal excellences. This last, of course, is an important index of the group's degree of social maturity.

To return to the statement, "These children live in a highly competitive society," let us analyze it from the angle of the student of child development. The statement is realistic and should not be lost sight of in guiding school children. Children must face the world able to compete. But the questions to be raised anent the wisdom of giving them plenty of practice in gaining this ability in the elementary school are the following:

1. School children, so far as we can tell from study and observation, delight in feeling themselves a part of a working group. They are in process of learning how to work together effectively. Do we heighten their future competence by stressing a totally different issue, that is, "You won't get on unless you can beat the other fellow," while these important cooperative skills are being learned?

2. If stress on competition is not good for children *now*, does it make any sense to sacrifice their present developmental needs to future needs, when the future is so strikingly all unknown these days?

3. Does it not make better sense to key down competition until the children have the requisite intellectual and emotional maturity to begin to analyze what we mean by a competitive society in terms of their own experience?

The more far-reaching question of the sort of world these children will want to live in as adults and the sort they will be willing to strive for is beyond the limit of this discussion.

their feelings are typically more nearly of the "all-or-nothing" variety than those of the average adult. When they are hurt or frightened they are, in the vernacular, "completely sunk," and no happy childhood days or knights and fairies about it. On the other hand, children who are normally advanced emotionally, who enjoy good physical health and are given half a chance for industry and vigorous play, give a fine picture of happiness in the sense of full enjoyment of life during most of their waking hours. Indeed, a full life and a vigorous one is descriptive of the mentally and physically healthy school child's state of being. Providing conditions for this sort of living becomes the joint task of the intelligent modern home, school, and community.

SOCIAL BEHAVIOR

Conformity to the Rules of Group Living

School children who are developing well in their relationship with their peers are able to accept with increasing grace the necessary rules of group association. The modern school and its staff, as individuals, take pupils in, so to speak, on the making of school and classroom rules, so that these represent the outcome of group thinking and planning rather than regulation by fiat from the powers in the school office. This thinking through and planning of school and class government by the governed is the best of all possible experiences for the young citizens of a democracy.

To begin with, there is the actual practice in reflective thought about the requirements of group living and how these may best be met. It is also much easier to keep rules, without a sense of being unfairly restricted, if you have yourself helped in their formulation. Reflecting upon how best a group can live together sharpens children's perceptiveness concerning other people's needs, makes them aware of what happens when individual needs conflict with group needs, and gives them experience in working out successful compromises and reaching final consensus. It is most important at this point in the history of modern education that the need for planning, administering, accepting, and assessing the value of rules of conduct be accorded the prominence which it merits.

Progressive schools, in their recent past, were criticized, and often with justice, about their weaknesses in connection with constructive discipline. Viewed in the light of contemporary psychology and psychiatry, the individual needs the discipline of group living with its necessary restraint upon what Erikson calls "the whims and wishes of his autonomous organism" for the strengthening of his ego and the eventual development of a mature personality. John Dewey,[6] writing in 1920, made this challenging statement:

> Now it is true that social arrangements, laws, institutions are made by man rather than that man is made for them; that they are means and agencies of human welfare and progress. But they are not means of *obtaining something for* individuals, not even happiness. They are means of *creating* individuals.

This stress on the importance of regulations for the very growth of the individual himself, now so widely recognized as crucial, has been reiterated and reexpressed in language more nearly expressive of the school's problems by William Heard Kilpatrick throughout his brilliant career as a teacher of education. But, unfortunately, some of the leading "practical school men" in the twenties and thirties failed to give due heed to this all-important insight. So more than one school "experiment" bogged down and actually gave rise to reactionary theories on the issue of unrestricted freedom for self-expression. He who would express himself must have a vigorous self to express as well as the techniques of expression. These values cannot be realized apart from a social milieu and the self-discipline which this milieu demands of the individual.

The Amenities

Learning the correct thing to do or say in a given social situation, like the acceptance of any convention, is motivated by the school child's need to succeed as a member of a group as well as to earn approbation from adults who are important to him. There seem to be two requirements for the development of the well-mannered child: the first and most important is an outgoing, friendly feeling for the people around him. In addition to this, if he is to rate as "nicely brought up" in Middle City or Butterville or cosmopolitan Manhattan, he must be provided with models to imitate who themselves represent the accepted good manners of their respective communities. These models, who are, for the most part, adults, must also have right feeling toward others, of which pleasant speech is one expression, if they are to be really good examples. It is necessary, in order to help children develop the amenities, that their elders treat both adults and children, in home and in school, with uniform courtesy and consideration, using "please," "thank you," "excuse me," "I beg your pardon," as local conventions require, in their intercourse with older people and the very young without difference or distinction. In short, the adult community is mainly responsible for the social graciousness of its children.

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[6] John Dewey, *Reconstruction in Philosophy*, p. 194. Italics inserted.

Initiative and Responsibility

The ability to exercise initiative and, conversely, the sound judgment that warns when *not* to take initiative develop, like all other abilities, with practice accompanied by fearless self-criticism. Teachers and parents should not only provide opportunity but also support the child in his self-originated efforts toward solving problems. It is for them to safeguard the young person's experiments by encouraging objective evaluation of results, not exactly cushioning failures, but helping to plan how to avoid the same failures another time. When such guidance is forthcoming, children who are growing normally in other areas of behavior will grow in initiative and sound independent judgment as well.

EVALUATING SOCIAL DEVELOPMENT

The judgment of adults, especially those of competent educators, has represented the principal means of assessing the social maturity of individual children in the past. Many times these judgments have proved to be sound, but, in other instances, they have been unsound and misleading because they were based on *subjective* rather than *objective* evidence. Recently, psychologists and educators have given serious thought to making such judgments more objective and have validated experimentally several ways of getting at data about individuals which are, at least in some measure, free from the bias of the individual observer. These techniques fall into the following classifications: anecdotal records, rating scales, paper and pencil tests, and sociometric methods derived from the careful study of group dynamics. A brief discussion of each of these varieties of technique follows.

Anecdotal Records

In the dim and distant past and, perhaps, in some places today where the light of scientific education has not yet penetrated, teachers' estimates of their pupils and parents' estimates of their own children, as well as community appraisals of problem, or potentially problem, children, had (or have) as their basis rule-of-thumb appraisal, judiciously tempered by information or misinformation gathered hither and yon from other people who had had experience with the youngsters in question. In the unregenerate past, certainly, the teachers' lounge or lunchroom was a spot in which appraisals of children flew around. "*What?* You have Johnny *Smith* in your class? Well, I know plenty about *him.* I had his sister and his two brothers, and I've *seen him* around the neighborhood!"

It was difficult, in view of the general toast that went around after a remark like this, for the most conscientious teacher to guard himself from some bias about Johnny; to him, this quite ordinary little boy became either a menace to the third grade in which he was enrolled or a persecuted victim of the prejudice of certain members of the school's faculty. It was really hard to be strictly objective about this freckle-faced, snub-nosed person who was all of eight years old.

In-service training, new, highly trained recruits to the profession, and a generally better-enlightened public have radically changed the average teacher's attitude toward the evaluation of his pupils in recent years. Many teachers are thoroughly alert to the danger of subjective estimates or arguments from the behavior of other members of an individual's family in making appraisals of pupils. The anecdotal record, used in many places for the past ten or fifteen years, was from the start a help in correcting subjectivity. As the name implies, this method consists in writing down definite events as the teacher sees them at stated intervals or in times of stress or just from time to time and using these records subsequently as a help toward a general estimate of a child. However, when—under the auspices of the American Council on Education—a group of experts examined the anecdotal records kept by a group of teachers and worked with these teachers themselves, it became apparent that many of them did not know how to make records which were objective and dispassionate, that is, free from "value judgments" and glib generalizations. It was only after prolonged group discussions and much individual effort that these teachers were able to record behavior to their own satisfaction and to that of the group as a whole. A full account of the experiment in in-service training has been published elsewhere,[7] so only two brief illustrations of objective versus subjective recording will be given here.

Miss Jones writes:

> Bill seems to get good care at home. Nevertheless he is just this side of being a confirmed truant; he stays out of school without any excuse, and when he does come he is surly, impudent, and lazy. He is an inveterate liar and most of us think he was one of the boys who broke into the school over the weekend and caused so much damage.

Compare with the above the following rewrite, after help from Miss Jones's supervisor:

> Bill's height and weight are average according to the Wetzel grid. His clothes are well cared for. Skin, hair, and nails are clean and in good condition. His attendance record shows an average of two absences weekly. One day last week he told me that he had played truant the day before and asked me what I was going to do about it. He sat down in his seat, doodled with his pen, and stared out of the window whenever I happened to look at him; he did not hand in any written work or respond to any question. The next day he told me that he had not done any homework because he had to help his father in the store that afternoon. His older sister says that he did not go home after school and no one knew where he was until he showed up at nine in the evening. I have not been able to find out where he was or what

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[7] *Helping Teachers Understand Children*, American Council on Education.

he was doing at the time the school was broken into Saturday afternoon. His parents and his sister say he was not at home from early morning until around seven in the evening.

Mr. Clark writes:

> Stephen is a well-adjusted pupil. He comes of a fine family; he is polite, intelligent, and ambitious.

After thinking over the whole subject of objective, meaningful records, Mr. Clark rewrites:

> On many occasions Stephen has shown qualities of leadership. He produced some of the best ideas about how to improve things in the lunchroom, for instance, to engage cooperation through "pep talks" and the provision of large, well-marked trash cans. He was also quick to accept Sandra's suggestion that good posters would be helpful. Stephen was elected chairman of the committee organized to interview the principal and the custodian about lunchroom improvements. Stephen's parents show interest in his school progress; there is a large library in the home and the family subscribes to a number of leading periodicals. His older sister graduated from college *magna cum laude*. Stephen says he hopes he can do as well some day.

In Miss Smith's first report she makes value judgments about Bill: "*He is* surly, impudent, lazy, an inveterate liar." She also quotes opinion unsupported by evidence: "Most of us think he was one of the boys who broke into the school over the weekend." In her rewritten report, Miss Smith confines herself to concrete incidents. Both records add up to the picture of Bill as a "problem"; but, whereas the first damns him for what Miss Smith *thinks he is,* the second accurately records *what his behavior is* at present. The subjective record leaves the reader feeling, "There he is. So what's the use of trying to do anything with him?" The second communicates, "This is how he behaves. Where do we start?"

Mr. Clark's first description is not very informative. Again, "Stephen *is* polite, intelligent, and ambitious. He comes of a fine [!] family." The rewrite, on the contrary, describes Stephen in action, if only briefly, and also gives some evidence concerning how he feels about his family as well as a glimpse of this fine family's interests.

Rating Scales

Rating scales, with which many of the readers of this book may be familiar, fall into the classification of techniques designed to make individual estimates of behavior more nearly objective. The underlying principle of all rating scales is that the rater is asked to place the person rated on a continuum at some point between the possession of practically zero "quantity" or degree of that trait and the possession of the trait to a marked degree. For example, here is a rating given to a pupil by a teacher on the trait of industry:

				X		
1	2	3	4	5	6	7
very indolent			average			very industrious

This teacher rates the child in question as above average in the trait of industry.

Many good rating scales have been published. Among these are the Winnetka Scale for Rating School Behavior and Attitudes,[8] especially designed for younger pupils; Olson's rating scale,[9] designed for school-age children but useful also in preschool groups; and, perhaps the most widely used of all at present, the Vineland Social Maturity Scale.[10] Taken in conjunction with other observations and reports, this method of recording has considerable usefulness, especially when two or more adults rate the same children using the same scale. Obviously, such ratings retain a certain degree of subjectivity but are very much better than snap judgments. They are especially good when, as in the Winnetka Scale, descriptive explanations illustrate the sort of behavior which would be rated as "extremely indolent," "average in industriousness," "very industrious," and various points between these three.

[8] Dorothy VanAlstyne and the Winnetka Public Schools faculty, *Winnetka Scale for Rating School Behavior and Attitudes.*

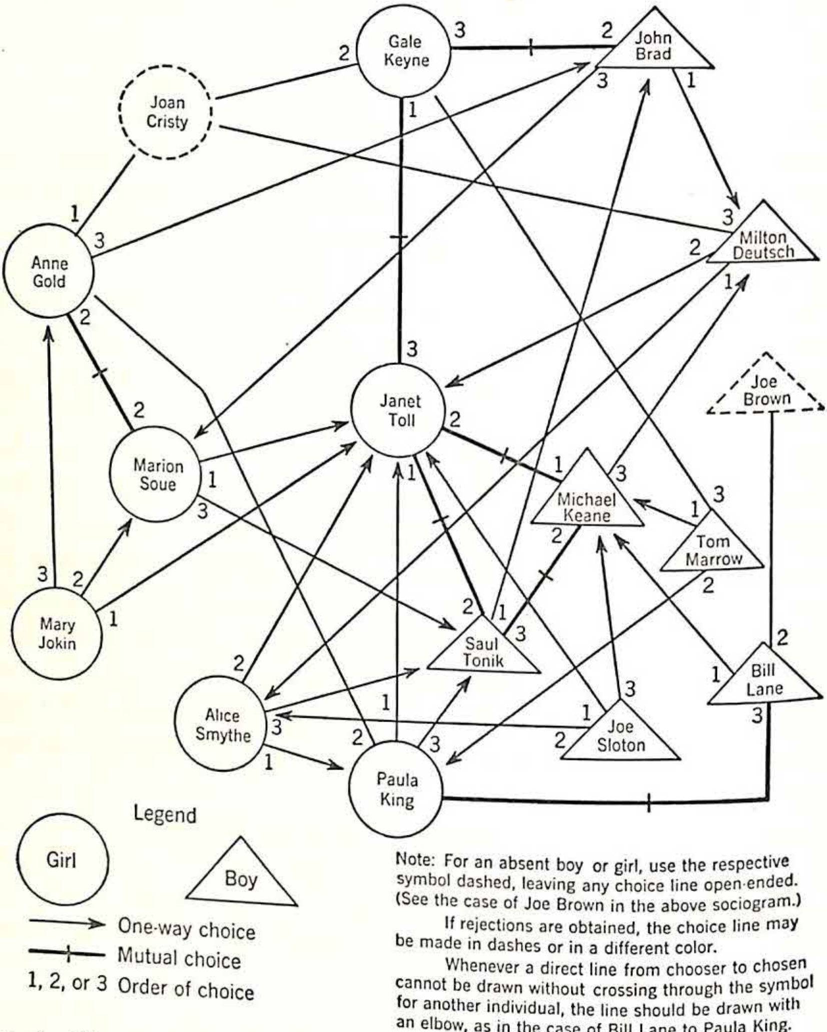
[9] Willard C. Olson, *Child Development.*

[10] Edgar A. Doll, *Vineland Social Maturity Scale.*

Sociometric Techniques

Sociometric testing is directed toward measuring the dynamic organization of a group. In the course of this testing, individuals are asked to express their choices of companions in any group of which they are members: companions to be seated next to, to work with on group undertakings, to be partners on picnics and excursions, or any one or more of a variety of joint undertakings. Each child may be asked to make one choice or a first, second, and third choice in each case. A charting of the children's choices in a school grade or any other organized group is called a sociogram (see Fig. 1). A study of this chart will show that some children are chosen by many companions, others by few, and one received no choice at all. Some choices are reciprocal: Gail K. chooses Janet T. and is chosen by Janet. Janet is evidently very popular, as a study of the number of first and second choices she receives will show. It is interesting, too, that Janet's own choices are reciprocated in each case, while only a small percentage of the total group choices are reciprocal. Also of interest is the fact that Saul T., Michael K., and Janet choose one another as mutual friends. Since each of these three friends is chosen as a preferred companion by several of the group at large, it is likely that the central trio will be a strong influence in the dynamics of the total group.

The very making of a sociogram is instructive for the teacher or other student of child development. It directs the attention toward interesting and important facts about groups, their structures and behaviors. When the maker of the sociogram is also responsible for the leadership of a group, the facts revealed about group choices are an important aid in the assessment both of the group and of individual pupils. The facts concerning choice also shed light upon motivations, both of individuals and groups, which might otherwise escape the leader. What influence, for example, does not being chosen at all have upon the behavior of Mary J.? Is she truly an "isolate" for this reason, or do other children who are themselves not popular ally themselves with Mary, and how do they severally react within the whole group in consequence? Does the fact that Mary is not chosen mean that she is therefore re-



Note: For an absent boy or girl, use the respective symbol dashed, leaving any choice line open-ended. (See the case of Joe Brown in the above sociogram.)

If rejections are obtained, the choice line may be made in dashes or in a different color.

Whenever a direct line from chooser to chosen cannot be drawn without crossing through the symbol for another individual, the line should be drawn with an elbow, as in the case of Bill Lane to Paula King.

FIG. 1. The social structure of one classroom. The data for this sociogram were obtained by asking each child in the class to make first, second, and third choices among his classmates for a particular social activity. (*Helen Hall Jennings, Sociometry in Group Relations: A Work Guide for Teachers, American Council on Education, Washington, D.C.,* 1948. *Used by permission.*)

jected? The last question could best be cleared up by asking children to record their rejections as well as their choices. This refinement of the sociogram techniques gives a more complete picture of a group situation than that presented by choice preferences only. Objections have been raised to asking for rejection statements on the ground that this may encourage the exaggeration of animosity or the well-known delight of the immature in offering destructive criticism. This objection seems to have little force if the leader who is making the study is at all skillful; for the beginner, it is probably well to have the possibility of such damage in mind and guard against it carefully.

In addition, the limitations of the sociogram as a technique for understanding a group of children should be kept in mind, even while its unquestioned values are admitted. The sociogram is a temporary picture, often influenced by the sort of situation just preceding the recording of choices. This is especially true of younger children. Susan may have just been invited to Mary's birthday party and her warm feeling at the moment is related to this pleasant prospect. Or John may have just had a fight with Jim, recording, in consequence, a fiercely rejecting mood. Also, the teacher determines the situations which limit the choices. If nobody wants to go for a walk anyway, what does it matter who one's partner is? If Tim has a bike and gives rides generously, why wouldn't Roy choose him as his buddy on a day's trip to the country with bikes permitted?

One authority suggests a further limitation, heartily endorsed by the present writer: the teacher, especially the inexperienced or unimaginative one, is strongly tempted to play Deity with the results, thinking of himself as a sort of *deus ex machina* in the whole business of group dynamics.

The Sociodrama and the Assessment of Social Maturity

The term "sociodrama," as it is here used, refers to a simple dramatization in which a group of youngsters portray a problem situation familiar to them, assuming or being assigned roles through which they play out the feelings and actions of the individuals in the actual situation. The possible use of this technique in helping a class work through and understand the problems of a person who is frightened or angry in a given situation was mentioned earlier in this chapter.

As an actual illustration, a member of a fifth-grade class reports her annoyance with her mother, who has a habit of interrupting her just as she settles down to do her homework to send her on an errand to the grocery store. On top of that, her mother doesn't get her grocery order straight the first time but calls her daughter back to add to it after the child has started out. Daughter, on one particular occasion, "talked back" and was reprimanded by her father. A small family scene resulted.

The class undertook to play out the situation. As a result, the girl who suggested the problem was helped by the group to see how she might have managed better if she had understood her parents' roles and tried to appreciate their needs! For instance, in the final rendering, the child helps her mother by suggesting items which might have been forgotten on the mother's first list. She also drops by father's armchair to pat him on the back and ask if *he* wouldn't like some cigarettes, since she is going to the store for mother *before* starting her homework.

Evidently, this was a bright class, the members of which had developed quite a bit of insight into "what makes people tick" and could suggest how to handle difficult jams effectively. In the case of each pupil, the teacher must have obtained new insight into the maturity of the individual, both as he or she offered suggestions or actually played out a role. For the children the play was a learning situation providing practice in problem solving.

The sociodrama has other, therapeutic, uses. These will be mentioned in a later section in which therapy with school children will be discussed briefly.

SUMMARY

The normally advanced child of school age is ready to work industriously at tasks which seem worthwhile to him and have social significance as well. Status in his peer group is of critical importance to him, a status based upon solid contributions to the group's activities. However, for really adequate security, the child needs approbation and support from his family and his teachers as well. His growing need for a sense of independence should be met by allowing him as much freedom as possible from parental "leading strings"; he should be encouraged to go places and see things by himself or with a group of persons his own age. Camping trips, hiking expeditions, sight-seeing, under the guidance of competent young adult leaders, strengthen a sense of personal adequacy and develop resourcefulness in caring for the child's own health, safety, and comfort. A wealth of firsthand experiences with the world about him provokes reflection and develops a variety of interests.

As an important part of his growing personal independence, the child needs to learn the value of money, through the use of a realistically adequate allowance. Sympathetic adult guidance in the saving and spending of money is sound economic policy and furthers the learning process; but there should be some opportunity to make independent decisions and even mistakes that are not too costly. Since the child of this age is interested in productive work and likes to do "real" jobs, he should be encouraged to earn money to supplement his allowance, being paid at fair rates for satisfactory work.

The average child of school age is not given to unrestrained expression of emotion; in fact, his desire for the approbation of his peers and the strong taboo against emotional expression characteristic of the peer group exert a powerful restraining influence. Joy and enthusiasm he may indeed show, but not fear or infantile hostility. At the same time, probably all children suffer from painful fears and hostility in some situations, even during these "tough," "big Injun" years of later childhood. It is important for adults to avoid creating situations in which fears and hostilities are easily developed; literature should be selected with discretion, especially for the younger school child; the excessive use of rivalry and competition as motives should be carefully avoided so that the destructive and painful emotion of jealousy is not needlessly aroused. Children can be helped to recognize and work through emotional tensions through skillfully conducted group discussion and through dramatization of real and hypothetical experiences in the sociodrama.

Since the importance of social and emotional development is now realized, the modern teacher is interested in evaluating the progress of his pupils toward social and emotional maturity. Records designed to assess this maturity are required in many school systems; in-service training of teachers in the technique of making anecdotal records is resulting in far greater objectivity, on the average, than was characteristic of earlier efforts. Sociometric techniques are also being studied and practiced by many teachers. The assessment of the maturity of individual children, as well as of their continued progress, is one of the uses of the sociodrama. Growing sensitiveness, not only to the fact that social and emotional development are most important, but also to the indications that this development is or is not going forward satisfactorily, is a major objective of graduate professional study in the case of the elementary school teacher.

CHAPTER X

Social Backgrounds of American School Children

There is no such thing as *the* environment of *the* American child.[1]

The Child and His Culture

Cultural anthropology now contributes to the student of child development a wealth of facts and ideas which has been accumulated during the last ten to fifteen years. This material demonstrates that a wide variety of cultures coexist within the general culture that we call "American" and also shows the crucial part that culture plays in making one child different from another. The cultural backgrounds of American school children differ radically, for instance, according to the region of the country in which they are reared.

As an example: [2]

> A Southerner has a pattern of family relationships, an attitude toward a settled existence, toward the land, toward the stranger, toward efficiency, that is different from the patterns of a person from the North or the Midwest.

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[1] *A Healthy Personality for Every Child,* Midcentury White House Conference on Children and Youth, p. 59. Italics in the original.

[2] *Ibid.*

These patterns are figuratively built into the nervous system of the child born in the deep South from the moment he draws his first breath; they will slowly but surely influence how he thinks and feels about religion, politics, manners, and morals. By the time he is eight years old, he will be an eight-year-old Southern boy with firmly rooted attitudes toward caste, "Yankees," social class, and religion.

On the surface, his school experience may not be so very different from that of the little boy in a Middle Western community, also eight years old, a day of whose home and school life has been recorded by Barker and Wright.[3] But the Southern child's home and community experiences will differ widely from those of Raymond Birch, the subject of the Barker and Wright study. Raymond lives in the town of Midwest, a county seat:

> Midwest is an alert agricultural county and its citizens have had more than a generation of education in the methods and values of scientific studies of grain and livestock production. Therefore, it is easy for the people of Midwest to see the importance of scientific studies of children. . . .
>
> The social class differences in Midwest are small. On a who-is-congenial-with-whom basis several rough groupings of the people can be observed, but there are no segregated residential districts; there is no slum; there is no country club. Most of the social organizations of the town are open to citizens of all groups. The dim social class lines of Midwest are honored as much in the breach as in the observance.[4]

Raymond's feelings about social class, "strange" people coming into his home to visit him for a day, morning breakfast with father and mother, sitting next to a Negro boy or girl, will probably differ radically from those of his peer in the South. Even though both boys proudly share the American culture, their reactions to this general culture will be deeply colored by the subcultures in which they are reared.

Differences of a significant sort in social background are not only regional. The farm child brings to his schooling a social experience very different from that of the city or suburban pupil; income brackets of families likewise affect the home lives of both city and country children. Parental occupation, irrespective of income bracket, helps determine the goals for which children strive and influences the home standard of living:

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[3] Roger G. Barker and Herbert F. Wright, *One Boy's Day.*

[4] *Ibid.*, pp. 3*ff*.

> Miners and sanitation workers and college instructors have approximately the same income, but, as a rule, they provide different standards of living for their children.[5]

Accordingly, the children have differing ideas about the value of higher education and the importance of a white-collar job when they grow up.

In addition to sectional differences, economic differences, and occupational-status differences in the families of school children, there are also differences arising because certain groups in this country have such strongly defined culture patterns that they actually run counter to the general American culture:

> There are such groups in the southern Highlands, among the descendants of the first white settlers of New Mexico, and elsewhere throughout the country. So, too, are the many Indian tribes who value their own culture over the culture of the white people who are their neighbors, and the peoples of Hawaii and other islands.[6]

Newly arrived immigrants from other lands and "New Americans," too, while they may admire the American culture profoundly, nevertheless tend to cling to the values of their own original culture and to bring up their children so far as possible in their own traditions.

Davis and Havighurst's study *Father of the Man,* cited in an earlier chapter, presents data in a most interesting and readable fashion which point up the differences between working-class and middle-class children in one community: the age at which they are toilet-trained; their attitude toward property, school work, and people generally; their use of obscenity and probable responses to conventional requirements in connection with personal honesty and sexual morality. Such differences must be recognized by any well-trained professional worker with children and taken into ac-

[5] *A Healthy Personality for Every Child,* p. 60.

[6] *Ibid.*

count in the assessment of an individual's growth—physical, intellectual, and social-emotional.

Teachers and other professional workers with children, as well as beginning students of child development, do not themselves represent a group homogeneous in social background and outlook. They derive from many or all of the subcultures existing in our country. Although they pride themselves on their enlightened, scientific attitude, it is still necessary that they be on the alert for the appearance of the prejudices of their own culture groups. The attitude of "the man with the notebook," as Stuart Chase characterizes the social scientist, is the best safeguard: to observe and note what happens in the behavior of individuals and groups, avoiding the value judgments about behavior which represent one's own limited outlooks. This method is clearly illustrated in *Father of the Man* and in such scientific recordings as appear in studies like *One Boy's Day*.

It is obviously impossible to make statements about the social backgrounds of American school children which are true concerning all children in all our culture groups. In this chapter it is mainly our task to consider certain facts about American homes and communities today which affect a great number of the children with whom most readers of this book will come in contact.

PHYSICAL SURROUNDINGS OF THE AMERICAN HOME

In comparison with home life in 1900, our homes today are replete with physical conveniences for the many, unheard of fifty years ago for even the privileged few. Electric lighting is taken for granted by a large proportion of the general population; so is modern plumbing and instant, unlimited hot water. In Midwest,[7] for instance,

> A few families are without one or more of the available utilities: running water, gas, electricity, telephone. Seventy-two percent of the families have running water; seventy-six percent, gas; ninety-eight percent, electricity; seventy percent, a telephone.
>
> Practically every family has a radio.

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[7] Barker and Wright, *op. cit.*, p. 3.

(It is probably true that at the present writing practically every family in Midwest has a television set.)

In all but the "underprivileged" homes of the low-income brackets, the home is equipped with well-designed installations, which are attractive to look at and make housekeeping easy. Hollywood kitchens for the middle class and reasonably good facsimiles thereof for the higher-income working class and the dwellers in community housing projects make the preparation of meals a very different matter from what it once was. In many homes, Susan and Johnnie learn their way around electric refrigerators, brightly lighted and perhaps self-defrosting; they no longer grope in the more hazardous icebox. Food itself is processed: shelling peas, peeling potatoes, and such chores are cut to the minimum. Electric laborsaving devices are the modern housewife's pride. Instead of developing "elbow grease" with an old-fashioned egg beater, Susan learns how to operate the Mixmaster. Susan and Johnnie can have fun helping mother in the kitchen; they learn how to use gadgets efficiently, but they learn less about how food is actually processed than do the generations growing up with old-fashioned kitchens.

The super-vacuum cleaner, fun to watch and use, replaces cleaning operations which required twice the physical energy and, if not less ingenuity, at least, ingenuity of a different sort. Lovely new fabrics, nylon and the like, with washing machines and electric irons in cooperation, make it much easier to go to school neatly and prettily dressed now than formerly. In fact, they make it possible for mothers and daughters especially to aim for "glamour" and achieve it rather successfully. With "home permanent waves" as a further accessory, no physically normal little girl need be "plain," and every glamour-scorning "regular" small boy, nevertheless, grows up surrounded with the glamour he will one day demand of his girl friends.

As we have already said, these comforts and gadgets are financially within the reach of the middle-class and the successful working-class family. These, as well as well-appointed furniture, may be purchased "on time," a fact which increases the proportion of the population enjoying modern luxuries and at the same time introduces an element of strain in many homes. Payments have to be met: "This isn't, strictly speaking, our furniture; we are 'paying for it.'" The strain increases as incomes fluctuate for one reason or the other; but it is important psychologically for many American families to have these things, regardless of the strain their purchase entails upon the family income and, indirectly, upon the personal security of the family's members. The family car, so heavily on the increase, is being purchased in the same fashion in the majority of instances; so is the television set with its high value for entertainment and amusement. When incomes are stable and adequately large the strain is slight; where the ambition to possess these good things and, thus, to be "as good as the next person" outruns the income, the strain is great and reaches to the youngest family member, even if only indirectly through the tensions of the older ones.

One upshot of all this is that the school child of today lives in physical surroundings which would have suggested the use of Aladdin's lamp to children a generation ago. He expects "wonders" of a scientific sort; he lives in a push-button world in which physical effort of many varieties is no longer required. On the other hand, he is quick to challenge wonders of the fairy-tale variety, if he is well oriented. A student teacher recently told one of the less fantastic fairy tales, which were once the literature of most young children, to a very young nursery group. A small boy, not quite four, eyed her thoughtfully and, when she had finished, announced with conviction, "Aw, you're *kiddin'!*" The modern child has put away many childish things. Magic and the supernatural do not terrify him easily, but he has, as was previously mentioned, other fears, bred from the scientific age in which he lives.

THE MODERN CHILD'S OUT-OF-SCHOOL OCCUPATIONS

After-school Activities

Although the spread of progressive ideas is gradually making of the school a place in which children *live* in full and happy fashion as well as *learn*, unfortunately there are still many children for whom life begins at 3 or 3:30 P.M. For these children, release from school means the chance to do real things: chores, more or less irksome but important, and delightful play activities. All healthy youngsters, regardless of their school experiences, fill their out-of-school hours with lively action but the exact character of these out-of-school doings varies with varying home and community environments. What the child does, what play equipment he uses, the degree of supervision afforded him differ with the standards and incomes of his parents and the facilities afforded by his particular neighborhood community. They differ, also, according to the section of the country in which he lives, its geographic characteristics as well as its conventions. Activities vary too according to whether the child lives in the city, the suburbs, or the country. Whether chores are important and time-consuming or fairly casual also depends upon his particular circumstances. However, the common factor underlying all individual differences is the growing child's need for, and delight in, activity which has meaning for him, carried on with a maximum degree of freedom from adult restraint.

Play, in the strict sense in which we defined it earlier, as activity engaged in only for its own sake with no ulterior motive, comes to an end early in the elementary school period. The fun comes to be quite as much in excelling as in the pure joy of vigorous movement. Play in later childhood is semisocialized, individuals generally caring more for excelling personally than for participating in the triumphs of a group. Various forms of tag, hide-and-seek, "cops and robbers," "prisoner's base," and the like, are universal favorites with the elementary school child; only the manner in which these activities are dramatized reflects the individual environment. For instance, cops and robbers may become "fox and geese" or "Indians and cowboys" or "the people on earth and the Men from Mars," depending upon particular circumstances. With the arrival of pubescence, there is less interest in very strenuous play and greater interest in games and sports of a highly socialized nature,[8] in which individual success is secondary to the triumph of the team.

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[8] For a discussion of the recreational interests of adolescents in comparison with those of younger children, see Elizabeth Hurlock, *Adolescent Development*, Chap. IX.

Delight in toys and playthings reaches a peak in the late preschool and early elementary school years. This is less marked in later childhood. A few girls are interested in dolls and doll carriages until ten or eleven years; hoops, jumping ropes, and marbles remain seasonally popular. Roller skates and bicycles become very important accessories; the vigorous preadolescent must have motion. Naturally, the toys and other playthings which children possess and/or yearn for vary with community standards and family income. In neighborhoods where the middle class dwells, Junior's bicycle is almost as important to the family prestige as the family car. In poorer neighborhoods, skates or odd wheels are attached to wooden boxes or crates by way of creating vehicles. Who has more fun in using his wheeled equipment, the boy with the handsome bike or the one with the homemade cart or scooter, depends a great deal on the individual. However, social factors also limit fun. There is competition and rivalry, sometimes painful, among the junior set in Suburbia as to which youngster has the finest bicycle; if Jimmy's family cannot afford a bicycle and, at the same time, lives in this setting, envy and frustration may spoil his pleasure in his ingenious homemade substitutes.

Five years ago radio programs, today television offerings, constitute the major home pastime for a great many children. This source of entertainment cuts across economic lines and is enjoyed alike by the "overprivileged" and the child whose family is on relief. On the other hand, it is not available in some sections of the country, nor can it be used in every terrain. Many studies have been made of young people's choice of radio programs and a great deal has been said, pro and con, concerning the value of radio listening. Today, much the same sort of discussion goes on about television. Some authorities on education stress the undoubted advantages of this type of audio-visual instruction; others applaud the well-presented amusement programs for children. On the other side, the ill effects of too much televiewing on the eyes, the fact that some children spend hours looking at television that might better be spent in outdoor play, the emotional damage from unsuitable programs, and, more often, the damage from too long and too unselected viewing are recognized hazards. The realistic student of child development accepts television as "here to stay," with its undoubted benefits and its hazards alike, and encourages people interested in the welfare of youngsters to bring pressure for better and better programs. A program of adult education designed to improve present methods of supervising and guiding children's televiewing might well accompany such pressure on the television industry.

The culture in which our children are growing up is giving them a store of meanings, a picture of a way of life which we call the "American Way." We have seen that this picture differs with the economic grouping as well as regionally and that the family and school play important roles in interpreting these meanings and thus building into the child the values whereby he lives and will continue to live. Television and radio are important means of aiding this value-building process. It is for teachers, parents, and other responsible adults to exercise critical judgment and intelligent guidance in helping children appraise their experiences, both direct and vicarious, to the end that the values they adopt for their own self-guidance shall be serviceable and true in "the inscrutable years to come."

Exploration

The younger the child, the greater his interest in exploring the immediate environment. Generalizations are misleading, but possibly the children in the families of the lower-income bracket get more chance at this early investigation of their surroundings than do their peers in the middle or upper classes. Older children go further afield, and the desirability of encouraging this wider exploration has been mentioned in the discussion on social development. Where the child goes, how intelligently he is guided, what he gains from his investigation, depends upon circumstances, and these again are determined by family and community standards as well as by economic privilege or privation.

Collecting

Most children love to collect. Witty and Lehman [9] place the peak of interest in collecting between nine and thirteen, when the average number of collections per child is from eight to ten. Seven- and eight-year-olds are quite indiscriminate in their collecting, as a rule; this is the age of sending for the free sample of everything and anything. Older children are increasingly selective and particular about their specimens. The younger the child, the less he takes care of his collections; it is the joy of amassing that counts. As he grows older, he begins to take greater interest in the arrangement as well as the value of his objects. Sympathetic adult encouragement, indirect and unobtrusive, adds much to the child's joy in collecting and makes for richer experience in connection with this activity. Parents and other grownups burdened by worries of how to make ends meet or tired out by too much work inside the home and out are naturally less inclined to encourage collecting activities; where quarters are cramped, the things children amass soon reach nuisance proportions. Indeed, many grown people who have the leisure and the space to tolerate the "mess" created by collecting tend to discourage this tendency in the young; their own collections, if any, are meanwhile cherished and carefully displayed. Teachers and group leaders, if they are skillful, may guide the collecting impulse into some very worthwhile group projects and may arrange to house collections, thus relieving crowded, overburdened, annoyed, or skeptical families of the responsibility.

What children collect and how much they collect reflect environmental conditions other than home surroundings. Lehman and Witty[10] found that rural children collect more objects than city children and that they continue their interest in doing so longer into the adolescent period than do city children. As one might expect, they collect natural objects such as flowers, insects, turtles, and the like, more frequently than city children.

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[9] Harvey C. Lehman and Paul Witty, Further studies of children's interest in collecting, *J. Educ. Psychol.*, Vol. 21, pp. 112–127.

[10] *Ibid.*

Caring for Pets

The average child, whether urban or rural, derives recreation from caring for and playing with pets. Dogs and cats are the most popular pets among children in our culture, boys strongly preferring dogs to cats. Younger children enjoy play with animals and are inclined to shirk the care of them. Adult insistence is often needed to be sure that the rabbit hutch is reasonably clean, the canary is fed and watered, the dog is walked. With increasing maturity comes increasing conscience, provided the child has been properly educated to the need for good care of helpless animals. Among some children the beauty, breeding, or simply "cuteness" of pets is a matter for rivalry. Other children are denied pets entirely, because the feeding of them would be a luxury far beyond the family budget. Others again may not have pets because their mother is afraid of animals or cannot endure hairs on the premises, or simply won't be bothered. In neighborhoods in which children cannot have pets because of lack of home facilities, pets of some sort, even only fish or turtles or perhaps a bunny rabbit, may well be included in the school's environment. When children have pets at home, the modern school cultivates this wholesome interest and incorporates it into curricular activities. Language arts, arranging pet exhibits, work with paint and clay express the love of pets effectively where children are given encouragement.

Parties

Janet, age five, went to a children's party. When her mother asked her what they did at the party, she replied, "Oh, we sat around and played games for a while. *Then* we had the party. Ice cream and candy and things that cracked."

Food remains an important element of parties throughout childhood; with the very young it frequently represents "the party" as in Janet's case. Relay races and other competitive games, pinning tails on donkeys while blindfolded, treasure hunts from the very simple to the quite elaborate, gain in importance with the age of the guests. The social amenities, which the adults sponsoring a party think so important, get short shrift from the youthful host, hostess, or party goer, unless there is prompting from the adult contingent. Excitement runs high; exhaustion is a frequent aftermath for all concerned. But parties are fun, unless grown people step in and spoil things. On the other hand, good planning in which adults and child hosts share is important; and every party should have one or two adults who *like* parties as guides, philosophers, and friends in time of emergency.

Parties are within the experience of a very large proportion of the child population in our culture. The joys and hazards of them do not vary greatly among economic groups, at least not for the preadolescent population. The party at home, at school, or at the church or the social settlement is fun, or boring, or overstimulating as the case may be, regardless of locale. However, the home party may be a special source of envy, frustration, and general heartache long before the days of "dating," indeed, even in the lives of the very young. Parties to which the *whole* class is *not* invited, competition among parents in giving elaborate parties, the same sort of competition in supplying "party dresses" create very painful situations for children and should be universally discouraged.

Special Instructions

Special lessons in art, music, and dancing help occupy the time of many of our school children. Religious and cultural education require an enormous amount of out-of-school effort among some groups. It is in these adult-planned special educational programs outside of school that the cultural and economic differences among school pupils are especially underscored. The New American child attends classes and services designed to build a respect for an older culture and a familiarity with traditional ceremonies and customs. These classes mark him off as belonging to a special group. All children who are given released time for religious instruction are categorized as belonging to segregated groups; and, by the same token, so are the children whose parents do not wish them excused for religious training and insist upon their remaining in school. So the activities supported by the differing culture groups recognized in the Midcentury Conference report underscore the differences dividing group from group. It is the task of the educator to help children respect these differences and value the contributions which each has to give to our whole culture; but, since not all adults, either parents or teachers or others, are skillful in presenting this matter of differences to young children, prejudices rather than mutual respect and acceptance remain a constant hazard to wholesome social development.

In cities, at least, opportunities for education in the arts during out-of-school time are available to the gifted. Those who cannot afford "private lessons" may enroll their children in settlement classes, after-school community classes, groups organized through libraries, museums, and other public institutions. Tuition for such classes is low, and there is generous provision for complete scholarships in most instances. However, this is true only of large cities; in smaller communities, the child whose family cannot afford piano lessons or dancing lessons or other special teaching is deprived of these opportunities open to the higher-income groups.

MAJOR AREAS OF HOME INFLUENCE

Religion

The religious attitudes, beliefs, and practices of parents influence children powerfully. In families in which religious affiliation is with a dogmatic or orthodox group, the religious ideas of the group are instilled in children from their babyhood. Case histories and, indeed, ordinary observation show that the effect of this early indoctrination upon character is very deep. When such training is given as a part of a wholesome family experience, when parents exemplify in their own lives the highest principles which their children are being taught, when care is taken to build faith and confidence rather than fear and anxiety in connection with religious belief, the effect upon the total personality is in the direction of giving meaning and purpose to life and stability in character and outlook. When feelings of guilt and terror of supernatural retribution are the outcomes, as is sometimes the case, integrity of personality may be threatened.

There is a fairly large segment of the population, drawn both from members of orthodox groups and religious liberals, in which parents want their children to have religious education and yet do not themselves practice their nominal religion. The children are sent to Sunday school or other religious instruction, where frequently they are exhorted to *bring their parents* to church services. It is difficult to see how this procedure can create anything but uncertainty and confusion in the minds of children about the meaning of religion, an uncertainty and a confusion which easily spread to other areas of parent-child relationship.

Still another typical attitude, affecting a substantial segment of the total population, is represented by those families in which all religious training is held to be an anathema. Some of these people think sincerely that religious education results in nothing besides fear, superstition, and guilt feelings. Others among them believe, with equal sincerity, that children should be left free from indoctrination and encouraged to formulate their own religious beliefs as adolescents or young adults.

Perhaps smaller than it appears, since, among the children attending liberal Sunday schools, there are many whose parents do not feel obliged themselves to attend church services, is the group in which adults attend religious services and children receive systematic religious instruction, but of a liberal sort with a minimum emphasis upon the supernatural. Most people in this group have read and thought a good deal, attended discussions and forums, and tried earnestly to develop a religious belief consistent with present-day scientific emphasis. A study of the attitudes of children reared with this religious background would probably show a lower incidence of religious prejudice among them than among certain other groups and, perhaps, a lack of clarity as to what major creed, if any, resembles the teaching which they have received.

Children reared in these very different creeds and religious practices now prevailing in our country are enrolled in our public schools and our many nonsectarian community institutions for the education, recreation, and care of the young. It is important that the student of child development, in assessing the maturity of an individual, take the child's religious background into consideration, having always in mind the general principles of child development. How has this particular five-year-old or seven-year-old reacted to the particular form of religious education to which he has been subjected? Has his ability to conceptualize and to reason kept pace with the demands made upon him in the course of his religious instruction? Are his concepts in this area thus far clear? Does he find direction and security as a result of religious training? Do fears and confusions appear to have been met intelligently by the people responsible for his religious guidance? Is the net outcome of such guidance apparently on the side of wholesome ego development, and, if not, how can adequate help of a sort acceptable to his family and to him be enlisted in his interest? Has the stabilizing and reinforcing sense of *belonging*, of being a member of an in-group, contributed toward tolerance of other groups and toward the ability to bring the members of other groups within his radius of understanding and friendship?

The answers to these questions will usually lead back to the kind of support which the family has given to the child in the course of his religious education; they will therefore be of infinite variety.

Politics

In the normal course of development, the young child identifies with his parents and will reflect the political beliefs or prejudices which his parents profess. The effect of early political "education" in the home is less deep-going, in the average American family, than the effect of religious education, especially if political instruction is compared with the religious instruction given in the family of strongly orthodox conviction. Probably only a small minority of families teach political beliefs to preschool children in any deliberate fashion. It is also true that the modern school, encouraging thinking and discussion as it does, soon acquaints the intelligent child with the fact that not everyone believes just as his family does, that there are two major political parties in addition to several recognized minority political groups, that, in short, politics is an area for debate in our democratic society. Therefore, although the political bias of the family has a head start with the oncoming generation, there is a chance for quite early deviation, and, in families where thinking and discussion are encouraged, there is family tolerance for deviation. Only in extreme situations, in which a party creed has been adopted as a part of, or a substitute for, religious dogma, does political belief influence the course of the normal child's growth.

Tolerance

Tolerance is certainly best learned in tolerant families. It is all too easy for parents to build their prejudices and dislikes for people who are different into the feelings of their children, especially when parents are themselves not too adequate and sense different racial or religious groups as threats to themselves. Yet, very tolerant parents are often shocked by the appearance of intolerance in their children. This is due to the early and powerful influence of the peer group, an influence which it is difficult and dangerous for adults to combat.

A highly intelligent child grew up to the age of eight in a family where tolerance and mutual understanding between races was practiced. Jonathan had as many Negro playmates as white playmates; a Negro boy was his preferred pal. At camp one summer, an interracial camp, he met an older white boy who was a good leader, and who appealed strongly both to him and his Negro chum. Jonathan grew quite possessive about the new friend and wanted to cut the other child out. He was overheard by his mother urging the older boy to go off on a trip with him, leaving the Negro friend behind, because, after all, *he was a Negro.* The little incident shed light upon some of Jonathan's other personal problems, his need to have exclusive status with his new friend. It did not permanently alter his relationship with his old friend, but his use of what *he had learned to consider a stigma* for his own purposes points up the fact that prejudice and vicious propaganda are easily learned in the general community environment. The causes of intolerance, while frequently lying in the home, are to be found elsewhere as well and cannot be wholly controlled through family education.

Family Goals

The goals set by the family for the children represent an important factor in the development of these young individuals. These goals, in turn, are determined by the class and caste in our total society in which the family lives. At the most deprived economic level, goals are limited to the attainment of making a bare living, which will satisfy the basic human needs for food, shelter, warmth, and general physical survival. Yet even here, in a typical American community, there is to be found a hope that somehow the children, especially the favorite children, will do a little better. The lower, middle, and upper-middle groups hold in common the goal of "keeping up with the Joneses," of having all the children "as good as the next one," in comparison with the community as a whole, and, if possible, just a little better.

Unfortunately, too, the ambition is not always uncomplicated by the successes and failures which the parents have themselves encountered in reaching their own goals. The son must achieve the education and the professional success which his father yearned for and somehow missed; the daughter must be more brilliantly successful in her marriage than her mother was. Or, the son and daughter must equal or exceed the parental success that has given the family high prestige in the community. Where son and daughter are equal to the challenge and where the family gives adequate support to the individual's effort, growth is wholesome and goals are realized; when the child has neither the requisite ability nor the personal qualities to realize parental ambitions, mounting frustrations make for unhappiness, retardation, and unfulfilled promise. By being held to unsuitable goals, through being cast in the parents' images rather than the individual personality pattern conditioned by his own growth trends, the young person experiences a continual sense of failure and actually becomes "a failure" in the opinion of society.

The film *Preface to a Life* gives a good imaginative presentation of what happens to an individual, in this case one Michael Thompson, when each parent holds different goals and has different ambitions for the growing son and neither is willing to allow him to grow according to his own individual design. In contrast, the film also shows a hypothetical life plan in which the same Michael Thompson is loved and accepted for what he is rather than what his parents would wish to make him. In the first instance, the adult Michael appears as a pitiful neurotic; in the second, as a successful, well-adjusted middle-class *paterfamilias.*[11]

Changing Patterns in Family Living

Of all contemporary influences upon the course of human development, the relative instability of the modern family is perhaps the most significant. The comparatively large number of "working mothers" who return to their jobs when their children are just past babyhood or before have among them an increasing number of professional women who deliberately set aside a certain number of years for childbearing and then return to the interesting activities for which they have been trained. Increasing divorce rates among most of the main cultural subgroups, periods of prolonged housing shortage affecting all but a privileged segment of the population, a family pattern disrupted because many fathers are in military service, all these are hard facts with which the growing young person must contend. The various community agencies (likewise a reflection of present social conditions), such as guidance centers, psychiatric services, planned group living for children, both part time and on a twenty-four-hour schedule, direct their activities for the most part toward building the young person's own security so that he may achieve growing personal stability in the face of a comparatively unstable home environment.

COMMUNITY INFLUENCES UPON CHILD GROWTH AND DEVELOPMENT

The community agencies mentioned in the previous section have developed because our American culture may be said to have an over-all concern for our country's children. The existence and the efficacy of these constructive measures vary, however, with local conditions and are limited by the apathies and pressures appearing in connection with the activities of the various subcultures. On the whole, communities appreciating and demanding child guidance agencies have such facilities, although probably few are able to extend them to all children who might benefit from their help. In the complex neighborhood settings of a great city, there may be a growing awareness of the need for such constructive help, an awareness spreading through almost all classes; at the same time, the actual facilities may be adequate to serve only a small percentage of the children who need them. In rural areas, facilities do not, on the whole, keep pace either with the need or with the demand of intelligent citizens. Yet, the sense that the well-being of children is the responsibility of the community is steadily increasing in pervasiveness.

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[11] It should, perhaps, be added here that the minorities representing the lower-middle and upper-upper classes are occasionally subject to similar family expectations with similar effects.

Constructive community influences are not limited to opportunities for direct guidance or needed therapy. Parks and playgrounds, museums and libraries, settlements, church groups, Boy Scouts and Girl Scouts, especially where really good leadership is provided, are, as was mentioned earlier, of great help to our children in achieving personal security, a sense of adequacy, and progress toward mature independence. All these agencies help form a defense against neighborhood community conditions which are actively harmful: slum housing, overcrowding of neighborhoods by numerous minority groups, each with its fears, insecurities, terror of, and hatred for, the people next door who are different and likewise beset by insecurity and hatred. Also to be reckoned with are local commercial ventures, the owners of which thus far are not willing to operate in accordance with the best interests of the youth in the community. Everywhere, from pornographic billboards to liquor traffic that disregards the rights of children or organized sale of narcotics, the child of the underprivileged neighborhood is subjected to community influences that constructive organizations for children are hard put to combat effectively. Prejudice and hatred and various forms of degradation seem to shriek so blatantly that the still, small voice of reason and human friendliness often fails to penetrate the confused mind of the young child coming to maturity amid some of our modern neighborhood conditions. These influences are the concern of the student of child development as well as of the sociologist.

SUMMARY

"There is no such thing as *the* environment of *the* American child." There are many subcultures within our over-all American culture, and the standards of the subculture to a great extent determine the standards of the individual child. There are sectional differences, economic differences, and occupational differences in our country, which create as many different cultural differences among the children in our schools. There are certain groups among whom cultural standards are in direct conflict with those of our over-all American culture.

It is impossible to consider all the important influences affecting all the children in all the subcultures of our country; the discussion in this chapter has been concerned only with some of the conspicuous facts about present-day living which affect most of the children with whom readers of this book will come into contact. The physical surroundings of the modern home, the typical out-of-school amusements and special experiences of the modern child, major influences of the home in the areas of religion, politics, family goals and ambitions, changing patterns in family living, all are determinants of how our children mature and develop. The infinite variety of these cultural factors within our common American culture presents a challenge to the student of child development.

Community influences are powerful; community resources have been developed in recent years, the activities of which are directed toward helping the young individual grow in personal security and independence amid the confusions of modern living. Certain destructive community influences, due to an imperfectly developed social conscience concerning the needs and rights of children, are still operative in many of our neighborhoods, in spite of a steadily growing general sense of responsibility toward the young.

The next two chapters will be concerned with the psychology of learning. The student is at this point asked to consider how the varying influences discussed in this chapter affect learning, how they operate to determine when, how, and what a given individual may be expected to learn successfully.

CHAPTER XI

The Learning Process

> Nothing is really learned until it has entered into living and to some extent remade it.
>
> WILLIAM HEARD KILPATRICK[1]

INVESTIGATIONS OF CHILDREN'S LEARNING

Learning is a process of changing behavior as a result of "activity, special training, or observation."[2] Changes brought about through learning are more or less permanent and are in the direction of increasing the individual's behavior repertory. Life becomes a little different with every new way of behaving that is learned. Experimental investigations of how children learn have followed studies made of adult and animal learning. It is a fact that early students of child development accepted and applied the results obtained with animals and adult human beings rather than investigating directly how *children* learn and that, in consequence, studies of child learning are, many of them, comparatively recent. In the present chapter, some of these studies will be briefly described to acquaint the student with their nature, and the results of certain experiments will be summarized.

In discussing experimental findings and their practical significance for students of child development, it is necessary to take cognizance of conditioning, acquisition of motor skill, memorizing and related mnemonic functions, and problem solving.[3]

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[1] William Heard Kilpatrick, unpublished class lecture, 1927.

[2] Norman L. Munn, "Learning in Children," in Leonard Carmichael (ed.), *Manual of Child Psychology*, p. 370.

THE CONDITIONING PROCESS

Conditioning in Animals

Pavlov and Bekhterev, two Russian investigators working in the last decade of the nineteenth century and the first decade of the present one, observed the phenomenon we call conditioning in connection with studies made upon dogs. Pavlov observed that stimuli frequently associated with the presence of food finally became, themselves, adequate to elicit secretory responses like salivation. Bekhterev worked on developing what he called "associative reflexes" in dogs. He aroused withdrawal, or protective, reflexes by stimulating the foot or leg with an electric shock. Then he introduced neutral stimuli, such as the flashing of a light or the ringing of a bell, at the same time he administered the shock. Finally, the animals reacted with *protective reflexes* in response to the *neutral stimuli*, light flashing or bell ringing, when these were administered alone, that is, without the presence of electric shock.

Conditioning in Infants

American investigators, notably, Marquis in 1931 and Wenger in 1936, have published the results of conditioning experiments on newborn infants. Marquis worked with an experimental group of ten infants and a control group of four. The experimental babies were stimulated with an electric buzzer for five seconds before feeding. Within five days of training, these babies began to show sucking and mouth-opening responses to the sound of the buzzer. They also began to cry and fuss less once the buzzer stimulus was presented. The four control babies were stimulated with a buzzer, but not at feeding time. These showed no conditioned responses.[4]

Wenger criticized Marquis' experiment on the ground that controls were inadequate and observation of the babies' responses too subjective. Wenger failed to elicit conditioned-feeding reactions in two newborn infants, while he did get results showing that newborn infants may be conditioned in experiments involving eyelid, respiratory, and limb-withdrawal responses. In getting eyelid responses, the unconditioned stimulus was a flash of light, and the conditioned stimulus, a tactile vibration of the foot. The tactile vibration was administered three seconds before the light was flashed. There were many fluctuations in the daily curves representing conditioned responses, and Wenger therefore concluded that, although conditioning is present in these young babies, it is unstable. The experiments were carried on with one baby for six months. The percentage of eyelid responses to tactile stimulation, that is, of conditioned responses, rose as high as 89 on one daily test involving 40 stimulations. But the acquisition curve continued to show great fluctuation and no trend toward becoming stable.

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[3] *Ibid.*, p. 373.

[4] *Ibid.*, pp. 371*ff*.

The conditioning of responses in older infants has been investigated by several experimenters. Munn, in the article just cited,[5] offers the following general conclusions concerning the conditioning process in infants on the basis of the restricted data so far available:

> . . . (1) sucking, blinking, limb withdrawal, respiration, crying, general activity, galvanic skin responses may be conditioned to tactual, visual, and auditory stimuli during infancy; (2) although newborn infants may be conditioned, the reactions are often lacking in stability; (3) older infants tend to evidence more stability of conditioned reactions than the newborn; (4) conditioning of the sucking reaction is dependent upon the existence of hunger; (5) retention of conditioned responses developed in infancy has, in some instances, been observed over periods ranging up to 7 months.

Munn also lists as tentative conclusions the following: when a baby is "trained out of" making a conditioned response by changing the association, for instance, failing to feed him after giving him a stimulus associated with feeding, he may recover spontaneously when the stimuli are once more associated. Also, when the paired stimuli are present *after* conditioning has been effected, the conditioned training may spoil the result, the baby making sucking reflexes less frequently. Munn further concludes from the evidence available that the "curve of extinction," or the curve representing the rate at which the conditioned reflex disappears, "approximates a mirror image of the curve of acquisition," that is to say, the curve representing the *disappearance* of the conditioned response would be the mirror image, approximately, of the *learning* curve for such response.

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[5] *Ibid.*, p. 376.

Conditioning in Older Children

A number of investigators have used laboratory techniques of the controlled nature of those employed by Pavlov and Bekhterev in conditioning animals in the experimental conditioning of preschool-age children. A pioneer in this field of research was Krasnogorski,[6] who investigated the possibility of conditioning salivation, swallowing, and mouth opening in subjects of preschool age. His results closely parallel those of Pavlov. Investigations by Mateer [7] and others seem to show that it becomes more difficult to condition by laboratory methods as the age of the subjects increases. It has been suggested [8] that this is due not to decreased susceptibility to conditioning but rather to the fact that older and less naïve subjects are less willing to submit to the procedure. This is a significant conclusion for the student of child development, pointing as it does to the fact that even the simplest "learning" involves the whole person, not just his reflexes!

In the first chapter of this book, an instance was described in which a little girl was helped to overcome an initial fear of entering a school building through a planned conditioning program. One group of investigators report a highly successful treatment of enuresis through the use of a most ingeniously and carefully planned technique, comparable to a procedure used in a laboratory.[9] The sort of problem represented by bed-wetting was carefully analyzed and described: [10]

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[6] N. I. Krasnogorski, Über die Bedingungsreflexe in Kindersalte, *Jb. Kinderheilk*, Vol. 19, pp. 2–24.

[7] Florence Mateer, *Child Behavior*.

[8] Gregory Harry Solomon Razran, Conditioned responses in children, *Arch. Psychol., N.Y.*, No. 148, 1933.

> Learning to awaken to the relatively vague and not very intense pressure created by a filling bladder, while successfully ignoring many other potentially disturbing stimuli [for example, a moderate amount of noise in the room, street noises, lights] must be for the young child something of a feat, especially in view of the pre-existence of a strictly subcortical neural mechanism for the automatic relief of this need.

A program of conditioning was planned to bring this involuntary act of voiding under the child's control by (1) causing him to associate getting up out of bed with bladder tension and (2) making him more sensitive to bladder tension in its beginnings, that is, in technical language, "lowering the threshold for this stimulus." The child who was the subject of the experiment was put to bed on a mat which, when urine wet it, was short-circuited and rang a bell. He was instructed to *get up* when the bell rang, open a switch disconnecting the bell, and then go to the bathroom and finish urinating. Thirty cases treated by Mowrer and Mowrer of children three to thirteen years of age were cured of enuresis in from four to eight weeks: "They learned, in other words, to anticipate the ringing of the bell by arising before bladder tension became so great as to cause reflex urination." [11]

Morgan [12] states that *all children who cooperate* may be cured by this conditioning method. Again, we have an illustration of the fact that successful learning involves the whole, cooperating self. It would be helpful toward the understanding of how much learning may be accomplished through simple conditioning, if we could know what emotional reactions accompanied this learning experience in the case of the cooperative children and the uncooperative ones as well.

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[9] Orval Hobart Mowrer and Willie Mae Mowrer, Enuresis: a method for its study and treatment, *Amer. J. Orthopsychiat.*, Vol. 8, pp. 436–445. Also John Jacob Brooke Morgan and F. J. Witmer, Treatment of enuresis by the conditioned reaction technique, *J. Genet. Psychol.*, Vol. 55, pp. 59–65.

[10] Mowrer and Mowrer, *op. cit.*, p. 437.

[11] Munn, *op. cit.*, p. 380.

[12] Morgan and Witmer, *loc. cit.*

Sensorimotor Learning

The gaining of sensorimotor skills is the main learning task of the infant and very young child. Therefore, the acquisition of the ability to walk, to grasp, to climb, and to perform related sensorimotor tasks was discussed in connection with the total growth process of the infant and the runabout baby. Learning, it was stated in the beginning of the present chapter, is a process of changing behavior as a result of "activity, special training, or observation." The experiments of Gesell and Thompson, McGraw, and others have shown that the basic skills, locomotion and prehension, and the skills directly derived from these basic ones are not directly affected by special training but, rather, depend very largely upon maturation plus child activity. This activity, Dennis[13] points out, is, for the most part, autogenous, that is, it is self-motivated and, on the whole, untutored. Little can be done through adult pressure or guidance or carefully planned teaching to speed up learning in these basic areas.

It is instructive to watch misguided kindergarten and/or dancing teachers labor to "teach" a young child to skip. By painstakingly demonstrating the hopping movements involved, these hardworking instructors may hasten the acquisition of a clumsy, unrhythmic version of this essentially graceful, rhythmic movement. In the uncooperative, they accomplish nothing except, possibly, lengthened retardation of skipping due to emotional factors. If either the cooperative or the uncooperative late skipper is left alone, some fine morning he will skip with the best of them, and the radiance of his smile will show what the achievement means to him. But the achievement, in this case, is unmistakably due to maturation plus such spontaneous effort and practice as the child himself wishes to carry on.

Hilgard[14] investigated climbing, buttoning, and cutting activities with trained and untrained groups of children of approximately the same ability at the start of the experiment. The time score of the practiced group dropped more rapidly than that of the unpracticed control group. But, when the control group was given one week of practice, the score for this group approximated the score of the experimental group. In the buttoning and cutting activities, however, some effect of practice was apparent. Both the experimental and the control group improved over the twelve-week period observed, but the untrained group was not able to reach the level of the trained group within an additional week of practice.

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[13] Wayne Dennis, The effect of restricted practice upon the teaching, sitting, and standing of two infants, *J. Genet. Psychol.*, Vol. 47, pp. 17–32.

[14] Josephine Rohrs Hilgard, Learning and maturation in preschool children, *J. Genet. Psychol.*, Vol. 41, pp. 31–56.

Other investigators have found that simple skills are improved by "structural growth and general practice" rather than by direct training. Marion Mattson,[15] investigating the effect of practice upon maze threading, found little difference, if any, as the result of practice when the maze was simple. However, "with more complicated patterns . . . the trained group gave a significantly better performance than the untrained, and the advantage possessed by the trained group increased as the complexity of the maze pattern increased." [16] As Munn indicates, this study suggests that investigations which show little or no gain from specific practice reach this conclusion because of the simplicity of the tasks involved.

One might expect that older children, because of their greater physiological maturity and their previous learning experience, would profit more than younger children from given amounts of practice in sensorimotor activities. However, experimental evidence fails to justify this expectation; if the older child indeed benefits more, investigations so far do not indicate it. Neither is there any evidence to show sex differences in successful sensorimotor learning. Furthermore, intelligence test results fail to show any significant positive correlation between performance on intelligence examinations and the learning of sensorimotor skills.

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[15] Marion L. Mattson, The relation between the complexity of the habit to be acquired and the form of the learning curve in young children, *Genet. Psychol. Monogr.*, No. 13, pp. 299–398.

[16] Munn, *op. cit.*, p. 382.

INCENTIVES AND THE LEARNING OF SENSORIMOTOR SKILLS

Investigations of learning in animals and in adult human subjects have shown efficiency in learning to be a function of the incentives offered. From what little work has been done in studying the effect of incentives upon children's sensorimotor learning, their reactions seem to differ in this respect from those of animals and adult human beings. The one comprehensive investigation of the role of motivation in sensorimotor learning by children is that of Abel,[17] using as a task a raised finger maze traced by five experimental groups. Her subjects were 100 boys between the ages of nine and ten years with IQs ranging from 100 to 129. They were given 30 trials, during a single experimental session, for which they were separated into five groups. Group I received no reward other than that which might come from the interest of the situation.

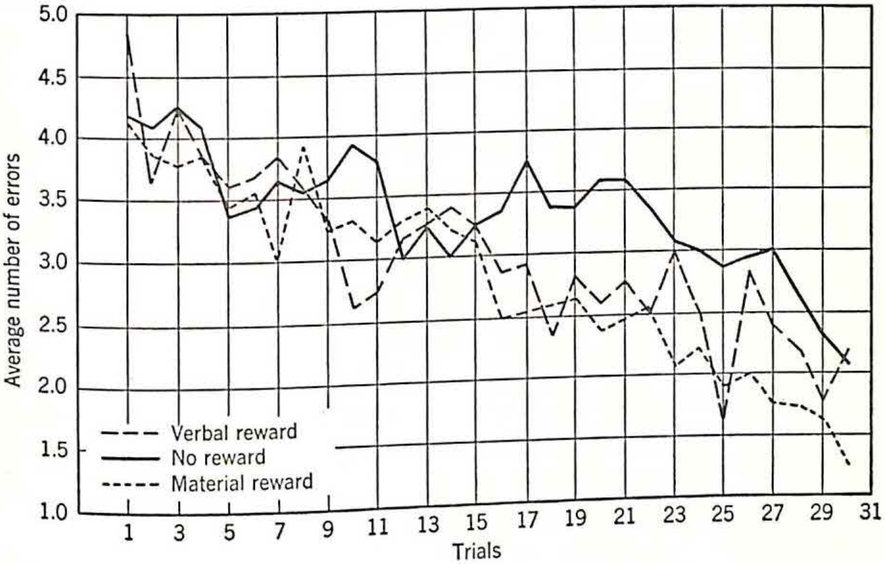

FIG. 1. Learning curves for children provided with different incentives. (*L. B. Abel, The effect of shift in motivation upon the learning of a sensorimotor task, Arch. Psychol., N.Y., Vol. 29, No. 205, 1936, pp. 22–23. Used by permission.*)

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[17] Louise B. Abel, The effect of shift in motivation upon the learning of a sensorimotor task, *Arch. Psychol., N.Y.*, Vol. 29, No. 205.

Group II received a penny at the end of each trial. Group III was rewarded by "Good," "Very good," "Let me see if you can make even fewer mistakes next time." Group IV received no reward for the first 15 trials and, beginning with trial 16, received a penny each time. The idea of adding this incentive was to see if the change would bring about a sharp improvement.[18] Similarly, group V received the verbal award through trial 15, at which time the material reward was substituted.

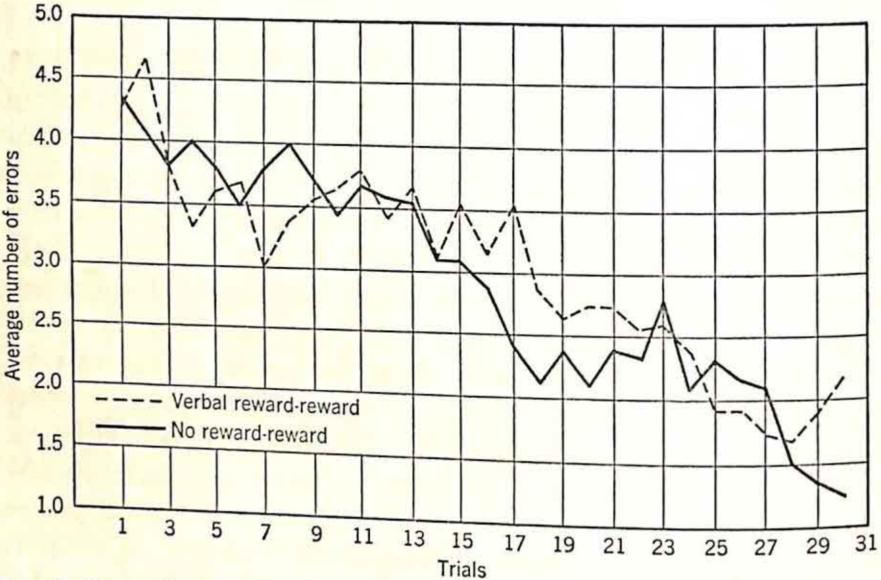

FIG. 2. The effect of changing incentives. (*L. B. Abel, The effect of shift in motivation upon the learning of a sensorimotor task, Arch. Psychol., N.Y., Vol.* 29, *No.* 205, 1936, *pp.* 23–24. *Used by permission.*)

The error curves in Fig. 1 show that groups I to III improved, but the group receiving no reward improved the least, while that with the material reward showed the most improvement. Fig. 2 shows the data for the change-of-incentive groups. It is apparent that there was no pronounced change in rate of learning in connection with either procedure, though, when the mean number of errors in the first 15 trials is compared with the mean number in the last 15, an increase in the rate of learning following the change of incentive is suggested.

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[18] Studies on learning in rats showed spectacular improvement with the presence of incentive, as reported by Edward C. Tolman, *Purposive Behavior in Animals and Men.*

It is significant that all the children improved appreciably, even those receiving no reward. Other motives were evidently present: inherent interest in the task or desire to get through with it and do something else, interest in improving the individual's own record, desire to please the examiner, or any possible combination of these.

THE RELATIVE EFFICIENCY OF DIFFERENT TYPES OF TRAINING

People interested in working with children in any capacity are concerned to know what are the best methods of training. Our discussion has shown that training involving incentives may be somewhat more effective than training without such incentive; there have been investigations to study which of several training methods are more effective when motivation is kept constant. Gates and Taylor [19] tried to find out whether children learn to write better when they are put "through the correct movements" by tracing. One group of kindergarten children, 21 in number, was allowed to trace the letters a b c d e, while another group of 14 children of comparable maturity was given daily practice in copying the same letters. In a copying test given both groups on the sixth day of training, the children who had copied had a mean score of 21.1, while, by the same method of scoring, the tracing group had a score of 8.2. When both groups were asked to copy letters they had neither traced nor copied before, both had low scores; but the mean score of the tracing group was only 0.77 as compared with 4.6. Thus, the transfer value, that is, the degree to which training in one situation may help out in a similar situation, was also greater for the copying group.

Melcher,[20] investigating stylus maze learning in preschool children who were given visual, manual, and visual and manual guidance, found that they made very little improvement that could be attributed to such guidance.

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[19] Arthur I. Gates and Grace Taylor, The acquisition of motor control in writing by preschool children, *Teach. Coll. Rec.*, Vol. 24, pp. 459–468.

[20] R. T. Melcher, Children's motor learning with and without vision, *Child Develpm.*, Vol. 5, 1934, pp. 315–350.

Goodenough and Brian [21] studied the effect of different sorts of verbal guidance upon learning to play a ringtoss game. The subjects of the experiment were three groups of four-year-old children, two of the groups, however, being very small. Group A, consisting of four boys and six girls, was directed in this fashion: "This is a game where we try to throw rings over a post. You should stand here on this base—be sure both of your feet are in the base all the time—and I'll hand you the rings." Group B, consisting of only two boys and four girls, were given verbal guidance, criticism, and demonstration throughout the experiment; they were told how to hold the ring but not how to throw it. Accordingly, sometimes they threw the ring down on the peg, sometimes they squatted and threw it up, sometimes they threw overhand and sometimes underhand, changing their methods from time to time. Group C, consisting of two boys and two girls, were required to hold and throw the ring in a prescribed fashion throughout; they were also given verbal guidance throughout their practice.

The children were given twenty trials a day for fifty days, their scores were the number of "ringers" in each twenty tosses. Two children in group A and one in group B failed to gain. All the other children gained, ranging from 4 to 56 in group A, 5 to 47 in group B, and 21 to 70 in group C. This would seem to show that, if you want to teach children to play ringtoss, the best method is to enforce definite rules for throwing at the start. However, the groups in this investigation were too small to justify any definite generalization.

Cox,[22] on the basis of studies of children and adults in connection with assembling, wiring, and stripping an electric lamp holder, concluded that improvement in such operations is much greater when people are given special practice and verbal guidance than when they are left to their own devices.

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[21] Florence L. Goodenough and Clara R. Brian, Certain factors underlying the acquisition of motor skill in preschool children, *J. Exp. Psychol.*, Vol. 12, 1929, pp. 127–155.

[22] John W. Cox, Some experiments on formal training in the acquisition of skill, *Brit. J. Psychol.*, Vol. 24, pp. 67–87.

TRANSFER OF MOTOR SKILL

A number of studies have been made in the effort to determine the possibilities of transfer, from one motor training situation to a somewhat different one, of the skill gained in the first training. The most significant results have been shown in connection with stylus maze learning. Jones and Yoshioka [23] obtained indications of substantial gain from having threaded one maze when confronted with a different maze pattern.

MEMORY

In studying memory, the investigator is interested, for the most part, in the retention of the effects of previous stimulation. This retention is measured: (1) in terms of the subject's ability to respond correctly in the absence of stimuli, for instance, the ability to perform correctly an experiment one has observed performed by someone else; (2) in terms of seeing the difference between old and new stimuli, that is, responding in some such fashion as, "I have read this before"; or (3) in terms of the power to relearn material one has learned previously with a minimum of effort in minimum time, for example, a part in a play which has not been rehearsed for some time.

The earliest measurable evidence of memory which appears in the behavior of the young child is the first of the above varieties, known as the delayed-reaction type. Hunter [24] and later investigators have gone about studying this type of memory by gaining a very young child's attention while hiding a toy or some other interesting object under a box or plate and then determining whether the child can find the object after being diverted to something else. One of Hunter's subjects, a thirteen-month-old girl, was shown three similar boxes, in one of which the experimenter placed a toy with which she had been playing. The baby's attention was then diverted; nevertheless, she was able to find the toy with a high degree of accuracy after eight to twelve seconds had elapsed. At sixteen months the same subject could respond accurately after an interval of twenty-four seconds.

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[23] Harold E. Jones and Joseph Geno Yoshioka, Differential factors in children's learning on a stylus maze, *J. Comp. Psychol.*, Vol. 25, pp. 463–480.

[24] Walter Samuel Hunter, The delayed reaction in a child, *Psychol. Rev.*, Vol. 24, pp. 75–87.

Charlotte Bühler [25] made extensive tests of memory in infants, beginning at the age of three months. At this earliest level, the test response consists of noting the disappearance of the tester's face (by looking disturbed or otherwise). At the five-months level, a toy is presented and then removed. The baby "passes" the test if he looks "searchingly" in the direction in which the toy has been removed. Assisted by Hetzer and Wilitski, Bühler also contrived a particularly ingenious test for children from ten to twenty-four months.[26] The child is given a ball containing a chicken which pops out when the ball is squeezed. After this ball has been played with, it is removed, and the child is diverted. Then another ball, not containing a chicken, is given to the subject. If he expresses surprise by looking surprised or by trying to poke his finger into the ball the baby is credited with memory. The maximum delay followed by memory recorded by these investigators is seventeen minutes at twenty-one to twenty-four months. This is a higher score than that obtained by other investigators; it is suggested that this is due to the interest and "naturalness" of Bühler's tests and also to her criterion for memory: facial expression suffices, whereas other investigators have required a more clear-cut overt response.

Immediate Memory

Immediate memory, or "memory span," has been the subject of many investigations. These have been directed toward determining (1) how such factors as age, intelligence, and sex affect memory; (2) how different kinds of material compare in ease or difficulty of memorization; (3) how visual and auditory presentation compare in efficiency; (4) how recall and recognition tests of retention affect results; (5) how the recalled and original materials differ (the latter especially in the case of narratives, figures, and pictures).

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[25] Charlotte Bühler, *The First Year of Life.*

[26] Hildegard Hetzer and S. Wilitzki, Experimente über Erwartung und Erinnerung beim Kleinkind, *Z. Psychol.*, Vol. 118, pp. 128–141.

Improvement of memory with age has been shown for all types of material. Most investigations show a positive, but medium rather than high, correlation between memory span and intelligence. In spite of a claim based on the results of some earlier studies that girls memorize more readily than boys, later investigations reveal no sex differences. The nature of the material affects the length of memory span, for instance:

> As reported by Hurlock and Newmark (1931),[27] the average memory span of preschool children for digits is 5 ± 1.00; for concrete words, 4.3 ± 0.65; for abstract words, 3.0 ± 0.30; for syllables in a sentence, 15.1 ± 1.20; for pictures 1.2 ± 0.35; for movements, 4.3 ± 0.65; for ideas in a narrative, 4.3 ± 0.00; and for commands, 3.3 ± 0.50.

Recognition seems to be easier than recall. Achilles [28] found that children between eight and a half and eleven and a half years old recognized an average of 29.35 words and recalled an average of only 5.22 words.

Memorizing

When material is presented repeatedly and retention is measured, the activity is considered a learning experiment. Many such have been made and recorded, their objects being to determine the relation between general intelligence and ease of memorizing, to study the age factor in memorizing, and to investigate the relative effectiveness of different ways of attacking material to be memorized. Two special investigations, one by Wilson [29] and the other by Stroud and Maul,[30] have indicated respectively that dull children, as estimated by intelligence examinations, are "on the average inferior to bright children in memorizing shorthand characters and descriptive selections," *although there were some cases in which bright children were surpassed by duller children,* and that in memorizing nonsense syllables and learning poetry, "memorizing is significantly related to intelligence."

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[27] Elizabeth B. Hurlock and Ella D. Newmark, The memory span in preschool children, *J. Genet. Psychol.*, Vol. 38, pp. 157–173; quoted in Carmichael (ed.), *op. cit.*, p. 407. (Plus or minus figures refer to "probable error of estimate," a statistical measure.)

[28] Edith Mulhall Achilles, Experimental studies of recall and recognition, *Arch. Psychol., N.Y.*, Vol. 6, No. 44, 1920.

[29] Frank Thompson Wilson, Learning of bright and dull children, *Teach. Coll. Contr. Educ.*, No. 292.

Comparative Efficiency of Different Methods of Memorizing

The question of how best to memorize is one of great practical importance both to teachers and learners. Some of the earlier studies of this matter, carried on both with adults and children, were made in the laboratory. More recently, the tendency has been to try out the relative efficacy of different procedures with children, either in classroom situations or in experimental setups planned to approximate classrooms. The questions to which answers have been sought are mainly the following:

1. What are the merits of the whole method versus learning material bit by bit?

2. Which is more effective, massed practice or distributed practice?

3. Does recitation of material to be memorized have any advantage over passive reading?

To the first question, whole versus part methods in memorizing, there is no clear-cut answer, since different investigators report different findings. The following critical evaluation by Woodworth [31] gives the net result authoritatively and succinctly:

> The parts are easier to learn than the whole and the learner is often happier and better adjusted to the problem when beginning with the parts. He carries over some of the skill and knowledge gained in learning the parts into subsequent learning of the whole performance. But he finds that putting the parts together is a serious problem requiring much further work. In the end, he may have saved time and energy by

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[30] James Bart Stroud and Ruth Maul, The influence of age upon learning and retention of poetry and nonsense syllables, *J. Genet. Psychol.*, Vol. 42, pp. 242–250.

[31] Robert Sessions Woodworth, *Experimental Psychology*, p. 223.

commencing with the parts—or he may not—much depending on the size and difficulty of the total task and the learner's poise and technique. If he can adjust himself to the whole method and handle it properly, he can learn quite complex performances by the whole method, while feeling free to concentrate at any time on a part where something special is to be learned.

To the second question, massed versus distributed practice, studies by Munn,[32] Kirkwood,[33] Foster,[34] and the general testimony of experienced teachers are to the effect that short practice periods with a rest between give the best results.

Arthur I. Gates,[35] investigating the advantages of recitation versus passive reading in connection with learning both nonsense syllables and short biographies, obtained best results when a high percentage of practice took the form of recitation:

> Recitation leads to greater certainty of one's knowledge. It enables the learner not only to know, but to be aware of how well he knows. Fewer blunders and erroneous recalls are made. The material is better organized; it is in more usable form.

Transfer of Improvement in Memorizing

Can skill in memorizing developed in one area, for example, the study of a history text, be "transferred" to another area, the study of poetry, or vice versa? In spite of some evidence gained in earlier studies to the effect that such transfer takes place, more recent investigators draw only very cautious positive conclusions from their training experiments. These conclusions are to the effect that, if a student of any age learns a good technique of memorizing, he will be able to use this technique in any other situation in which it is applicable. However, there is *no* evidence that a general ability called memorizing can be developed through training as a muscle is developed through exercising.

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[32] A. F. Munn, The curve of learning, *Arch. Psychol., N.Y.*, Vol. 2, No. 12, 1909, pp. 36–52.

[33] Julia A. Kirkwood, The learning process in young children: an experimental study in association, *Univ. Ia. Stud. Child Welf.*, Vol. 3, No. 6.

[34] Josephine C. Foster, Verbal memory in the preschool child, *J. Genet. Psychol.*, Vol. 35, pp. 26–44.

[35] Arthur I. Gates, Recitation as a factor in memorizing, *Arch. Psychol., N.Y.*, Vol. 6, No. 40, 1917.

Forgetting

Is the saying "Easy come, easy go" true in learning? Is the quick learner the quick forgetter? Investigations on retention and forgetting answer this question negatively.[36] There is, on the contrary, a positive correlation between quickness of learning and retention.

Do children tend to remember pleasant words more permanently than unpleasant ones? Are indifferent words remembered as readily as those which have a definite feeling quality? These questions are very interesting in the context of an organismic approach to the study of learning. Experimental investigation seems to show: "In general . . . pleasant associations and words are retained somewhat better than unpleasant ones." [37] However, one investigator [38] found that unpleasant words are retained better than indifferent ones, and another [39] concluded that the children he studied retained pleasant and unpleasant words equally well.

PROBLEM SOLVING

This discussion was anticipated in Chap. IX, in which we considered the development in children of the ability to think. Here we are interested in what strictly conducted experiments show about children's problem-solving activities. The definition of problem solving adopted for these experiments is the type of learning which involves "attainment of some more or less specific goal under such conditions that observing relations, reasoning, generalizing, or what the Gestalt psychologists call 'insight,' greatly facilitate the learning process." [40]

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[36] Annette Lillian Gillette, Learning and retention: a comparison of three experimental procedures, *Arch. Psychol., N.Y.*, Vol. 28, No. 198, 1936.

[37] Munn, *op. cit.*, p. 423.

[38] Harold Dean Carter, Effect of emotional factors upon recall, *J. Psychol.*, Vol. 1, 1935, pp. 49–59.

[39] G. M. Gilbert, Age differences in the hedonistic tendency in memory, *J. Exp. Psychol.*, Vol. 21, 1937, pp. 433–441.

[40] Munn, *loc. cit.*

Recalling Dewey's analysis of a complete act of thought, such activity is involved in the implicit testing of a hypothesis in any number of practical life situations. For instance, I am shipping a parcel containing something urgently needed by a friend in Boston. Shall I send it by parcel post or express? Before rushing into action, which is less expensive? How easy will it be to get the package to the post office? To the railroad station? What are the probable delivery conditions at the other end? How long will the package be in transit? In each case, how soon will it probably leave the town in which I live? Such simple, everyday affairs require problem solving, since they involve noting and relating numerous factors in the context of a given situation. In the investigation of problem solving in children, all manner of experimental situations have been used, from puzzle boxes to mathematical problems.

When confronted by a new situation in which there are no "cues," both children and adults use a "trial and error" method, but some subjects use a more "logical trial and error method than do others; that is, they seem to formulate hypotheses concerning the situation. This tendency has been shown to be a function of increasing age." [41]

As far back as 1897,[42] an investigator studied the reactions of children in grades three to eight to a puzzle in which figures had to be traced without retracing, crossing lines, or lifting the pencil. Younger subjects were found to make haphazard attacks and to show little improvement from one attempt to the next. Older children showed a greater prevision, greater ability to analyze the designs, more radical changes of method in response to failures. Forty-one years later, L. W. Gates,[43] using a multiple-choice situation, also observed increasing deliberateness of procedure with increasing age.

Verbalization, for instance, calling the child's attention to a successful response, has been shown to be an aid in learning to make a right decision where multiple choice is involved. The ability to generalize, that is, to solve a problem by applying a principle learned in a previous problem, has been shown, in some experiments, to be positively related to intelligence and to mental age.[44]

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[41] G. V. N. Hamilton, A study of trial and error reactions in mammals, *J. Anim. Behav.*, Vol. 1, pp. 33–66.

[42] Ernest Hiram Lindley, A study of puzzles with special reference to the psychology of mental adaptation, *Amer. J. Psychol.*, Vol. 8, pp. 431–493.

[43] Louise W. Gates, The genetic development of rational learning in children, *Psychol. Bull.*, Vol. 35, 1938, p. 713.

Problem solving in the classroom situation will be discussed in the next chapter; here it will be enough to note that one investigation disclosed greatest success when arithmetical problems were framed in terms of *everyday life*. It is also interesting to note that, in a group of college students studied by Healy, only 32 per cent gave evidence of solving problems in geometry by insight.

SUMMARY

Investigations directed toward discovering how children learn have been numerous and varied. However, only a few conclusions applicable to classroom and other real-life situations have been reached. Some of these are, briefly, the following:

1. The learning of infants and very young children is inferior to that of older children because of neuromuscular immaturity. The learning of these very young children is, for the most part, limited to sensorimotor performances and, hence, dependent upon maturation and self-initiated practice to a very large extent.
2. As children grow older, they are more capable of modification, hence, of learning, but also more resistant to modification; they are less naïve, and, having developed a wider range of interests, less docile and more critical of artificially constructed learning situations in the laboratory or the psychologist's office.
3. Because of their greater sophistication and the competition among their various interests, children, as they grow older, become more susceptible to incentives such as rivalry or verbal and material rewards. This has been shown to be the case in several investigations.
4. Once the handicaps of neuromuscular immaturity have been outgrown, practically all the differences in learning as between

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[44] William Healy and Grace M. Fernald, Tests for practical mental classification, *Psychol. Monogr.*, Vol. 13, No. 54, p. 54.

older and younger children may be attributed to differences in motivation and previous experience.

5. In memorizing and problem solving, there are large differences in the performance of older children and adults in comparison with young children. Munn,[45] however, inclines toward the conclusion that these differences are due to differences in past experiences, including familiarity with symbols and their uses, and to variations in motivation rather than in actual memorizing and problem-solving abilities. He says that age differences in learning are due to "variations in neuromuscular maturation, in motivation, and in previous experience, but not, apparently, to a different kind of learning process in each."

Indeed, everything that careful investigation and practical experience have shown us concerning learning points to the need for understanding the *learner* and for progress in the development of better teaching procedures, as well as more genuine and adequate motivation for the learning process. Such progress will not be possible without increased understanding of the needs of the individual pupil and the experiences, both for good and ill, which he brings with him into the classroom. As Rasey [46] has aptly phrased it, "The child comes to school, but he brings his family with him." For good or ill, his out-of-school experiences, especially his basic relationships within the home, will enter into his learning, whether it be of simple skills, sensorimotor performances of a more complicated sort, printed matter, performance to be memorized, or problem solving.

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[45] Munn, *op. cit.*, p. 441.

[46] Marie Rasey, *Toward Maturity.*

CHAPTER XII

Learning through the School Curriculum

> . . . as civilization advances, the gap between the capacities of the young and the concerns of adults widens. Learning by direct sharing in the pursuits of adults becomes increasingly difficult. Intentional agencies—schools—and explicit materials—studies—are devised. The task of teaching certain things is delegated to a special group of persons. JOHN DEWEY [1]

GUIDED PUPIL LEARNING

In the modern school at its best, the classroom is, first of all, a laboratory in social relationships, and the teacher's most important task is held to be that of guiding and encouraging shared activity in the group of peers which constitutes his class. However, the school as an "intentional agency" and the teacher as a member of a special profession also have the vital responsibility of seeing that children learn the facts and skills which must be at their command if they are to function effectively, both now and later, in the complex society in which they live. Learning the three R's and learning them with as much dispatch as possible is as important for the child's wholesome development in the world today as is learning to eat in a socially approved fashion or acquiring the skill of grooming himself properly. The importance of learning to read and write and manipulate numbers at the age expected of him according to current cultural standards looms large in the world of the school child. But the learning of these things requires work, concentration, and the inhibition of other activities which are, in a sense, more "natural" to active youngsters. The number of symbols which must take on meaning for a pupil before he can read and write is tremendous; the mastery of elementary arithmetic requires hard thinking as well as the exercise of memory.

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[1] John Dewey, *Democracy and Education*, p. 9.

School work is comparatively easy for the intellectually gifted and progressively more difficult for those who are less highly endowed with the abilities that intelligence tests measure. Yet, even the gifted child needs guidance, and it is his right to be taught in the most effective manner possible so that his time and energy may be released for all manner of other learning experiences; the less gifted pupil may encounter difficulty and disappointment and a growing sense of inadequacy if his teachers are unimaginative or lacking in skill.

An amusing incident, illustrating how easily inexperienced students of "progressive education" may be misled in this matter, is the following: A group of graduate students observed the activities of a beautifully conducted first-grade class in a demonstration school for a full year. In this grade the five-and-a-half-year-olds were not actively encouraged to engage in activities directly related to reading; they were merely "exposed" to reading. They were likewise exposed in their delightful classroom to a well-equipped workbench, paints, building materials, and other invitations to learning. In the case of one little boy, exposure to the workbench took violently; the charming incitements to literary pursuits passed him by. His mother, a teacher and graduate student, was told that, in order to adjust well to second grade, he should at least start on learning to read. Could she perhaps tutor him, being very careful to use progressive methods? He was, alas, too mature socially and much too tall to be a candidate for repeating grade one.

The tutoring was accomplished, successfully so far as the child's mastery of reading went, in the course of an otherwise hectic six-week vacation. Mutual understanding between parent and offspring was very strained at times although rapport was presently restored as a result of success in the undertaking.

That fall, the same group of graduate students observed the same group of children, now in second grade. The small boy's mother overheard one of her classmates say to another, "Isn't it wonderful how these children just *blossom* into reading?" She muttered something under her breath and let the comment pass.

Children do not blossom into reading. They learn to read, once they have attained readiness, by hard work in the majority of cases. The concentration and sustained effort required for success in reading are too difficult for the average five-and-a-half- or six-year-old; this is one reason why modern schools defer the teaching of reading until well into the seventh year for the majority of children.

PRINCIPLES OF TEACHING AND LEARNING

Progress in the study of educational psychology achieved through a great deal of careful research has led to the formulation of the principles of teaching and learning now accepted by the majority of teachers and school administrators. These are:

1. Learning a particular lesson in arithmetic or reading or spelling or history is never a completely isolated experience. For good or ill, more than the specific subject matter taught is learned in every lesson.

2. Competent investigations seem to show that children learn best when the classroom atmosphere is relaxed, friendly, and permissive.

3. Available information about optimum conditions for successful learning should be known to the teacher and be considered constantly in the selection of subject matter and the use of specific teaching techniques.

4. In dealing with the particular learning difficulties of a group of pupils or an individual pupil, the well-trained teacher studies the problem with the same care and objectivity as the research worker exhibits in his controlled laboratory study of learning situations. In so investigating how learning takes place in the natural setting of the classroom, the teacher equips himself to further the

normal course of child development through the specialized form of nurture for which years of professional training have prepared him.

LEARNINGS ARE NEVER SINGLE

When John or Susan learns how to handle zero in the tens column in subtraction or how to spell "receive," other facts and, indeed, other skills than those intended by the teacher are learned simultaneously. First of all, each of them learns that the teacher is a sympathetic, helpful person or that he is impatient or inept. Each also learns over and over in every lesson what it is like to succeed or fail, whether it is "fun" to do arithmetic, whether spelling bees are amusing or painful, whether school is, after all, a pretty good place to come to, and any number of other feelings and attitudes. When John struggles with zero in the tens column, he may learn to get results by sheer successful memorizing, and his teacher just may be deceived into thinking he understands what he is doing. "Fooling" the teacher may become one of John's special skills. Or John really manages to "borrow" and return with accuracy by thinking through the process, thus incidentally practicing the ability to solve problems through sound reflection. Susan may gain skill in copying from the girl in front or become so distressed about *e* before *i* that spelling becomes a bugbear or learn how to visualize r-e-c-e-i-v-e and thus to practice this and many other difficult spellings effectively. Sometimes children other than John or Susan may "learn" deepening feelings of inferiority through failing to master subtraction or spelling. These feelings spread, like the ripples in a pool when a stone is thrown into it, to most of the other tasks in life. Or a tired, irascible teacher may frighten a sensitive, confused child so thoroughly that learning the lesson becomes impossible.

A school principal, taking over his first assignment, told of overhearing a teacher screaming and a child sobbing in an elementary classroom. He drew near to listen to the teacher's words and was rewarded by piecing out through the din this ultimatum: "You will stay *in* this afternoon until you can spell *happiness!*"

Not being omniscient, the teacher cannot possibly know all that a particular lesson may mean to a particular child. He may, however, realize, first, that a great deal of learning goes on in his classroom of which he is unaware and, second, that some of this related learning may be of far greater significance to individuals in his class than the particular subject he is trying to teach. More important still, he may build up a rapport with his pupils such that they will share with him increasingly the unintentional "teaching" for which he is responsible.

The author recalls a demonstration lesson for a group of visiting college students in a fifth grade in which the teacher, although a long way from being a "patient soul," had established very fine rapport.

"Why don't you give better answers?" she snapped.

After a few seconds' silence came the diffident reply, "Because we aren't specially interested."

"Why didn't you tell me you weren't interested?"

"Because you'd holler."

The teacher and the class laughed heartily. When the adult had her breath, she asked, "And what makes me holler?"

"High blood pressure," said one boy sympathetically.

The subject was dismissed and the class went on to another lesson with spirit.

Elementary school classroom experience affects the highly sensitive area of opinion, belief, and prejudice to an important degree. There is no adequate way of measuring this effect, and it may vary greatly between individual pupils in a class conducted by the same teacher. Since results in this area are so resistant to immediate measurement, even to immediate recognition, it is highly important that the adults responsible for the guidance of elementary school pupils take every precaution to assure wholesome learning. Such precaution takes the form, on the positive side, of encouraging pupils to think reflectively and to base opinions on facts. On the negative side, guidance should be directed toward the removal of prejudice and the avoidance of indoctrination in any principles other than those involved in the democratic way of life. Elementary school teachers, especially those who have a fine rapport with their pupils, willy-nilly exert a strong personal influence in this matter, a power which should be used with the utmost discretion. Furthermore, textbooks should be selected with care and, if a book which is otherwise excellent reflects a particular author's bias, pupils in the middle grades may and should learn to detect such bias. In the past, far too many children have learned historical facts about the exploration and development of our country, the Revolutionary War, the Civil War, Federalism, free trade, and countless other topics together with deep prejudices toward individuals and minority groups. The prejudices frequently have been woven firmly into the structure of personality to affect behavior drastically long after the facts were largely forgotten.

Permissiveness versus Authoritarianism in the Classroom

The permissive classroom is the one in which each pupil is free to live and work as a member of a peer group, at the same time enjoying the guidance of an adult whose character is not that of an authoritarian leader but rather that of a mature person responsible for encouraging the growth of less mature people. In this classroom the teacher and the pupils plan *together* so that the pupils' growing ability for self-direction is encouraged rather than thwarted by teacher-made decisions. The children share with the teacher the responsibility for the outcome of these decisions and work with him in evaluating the results achieved.

The permissive classroom is *not* the one in which there is no "discipline" nor one in which the teacher surrenders his role as a mature guide in classroom management. While the class shares with him the responsibility for a party which is a failure because it was not properly planned or the pride and recognition of a school assembly well conducted, the ultimate responsibility for setting up and maintaining situations in which children grow to their fullest capacity is the teacher's. Discipline in the democratic classroom consists in the assumption of responsibility and its performance and in the setting of limits for the conduct of the individuals, as members of a group, as well as for the group as a whole, with respect to the school community of which it is a part. In the permissive classroom the teacher's goal is to allow individuals and the class, as a whole, maximum self-direction in allocating, assuming, and carrying through responsibilities as well as setting limits of freedom.

It is, however, also incumbent upon him to help when individual or group capacity for self-direction is not adequate to the strain imposed. The situations in which even very competent groups need help are many: a too-aggressive member may present too great a problem for pupils to deal with without guidance, or a problem of how to cope successfully with a situation involving moral values may be too far beyond the children's emotional maturity.

A small group of third graders waited upon the teacher; they had wanted a "class president" to lead them and had been allowed to elect the big, aggressive, hostile candidate of their choice. "We don't want Junior for president any more. He yells like a bad teacher. We'd rather have you," was their highly flattering estimate of the situation. With guidance during a great deal of discussion, it was finally agreed that Junior would carry on for the rest of the week at which time a new president would be chosen, who would profit by Junior's experience. After all, it was suggested, it was hard to be the *first* president!

In the same school, a sixth grade found itself in a jam because $2 had disappeared from a class fund and the treasurer *knew* who had taken it. The treasurer proved to be mistaken; it was fortunate that she was wise enough not to make a direct accusation without consulting the teacher. One of the young children in a primary grade was found, through the wise action of his mother, to be the person responsible. Completely exonerated from responsibility so far as its own membership went, the sixth grade decided that neither the treasurer nor the group was sufficiently careful about seeing that no money was left around to mislead younger children. That particular group learned much from this unhappy experience and engaged in excellent group thinking. Without adequate adult guidance, a serious injury might have been done to the wrongly accused pupil, and, even had the mistake been corrected, group learning would have been for the most part negative or, at best, confused.

In a permissive classroom, then, teacher and pupils learn from one another, and the teacher does not feel inhibited about sharing his more mature wisdom with the children. He functions as a sympathetic, interested, *well-trained adult* in a group of children. Association with such an adult helps a growing child. Here is someone, not *in loco parentis* in any authoritarian sense, not a "boss," but a friend whose greater maturity lends support and clarification while the child is learning self-discipline and self-direction.

On the other hand, the authoritarian teacher, even when this characteristic is combined with engaging qualities such as humor, the ability to "make a subject interesting," and the like, creates difficulties for the developing child, for such a personality cannot fail to discourage self-direction in the pursuit of the healthy child's widening interests. The authoritarian character, to a greater or less degree, lacks the experience of loving and being loved and tends to regard other personalities, even the personalities of growing children, as threatening to him. Instead of learning self-discipline, the child learns from an authoritarian teacher to accept imposed discipline, and, instead of evaluating successes and failures objectively, he overvalues performances which the teacher approves. The authoritarian usually permits or positively encourages competition; he tends to teach children to regard their peers the way the teacher regards his, as dangerous competitors, enemies, instead of helpful friends. Unfortunately, there are still authoritarians among our teachers, and the student of child development needs to be alert to their effect upon child growth. The authoritarian teacher is, by definition, incapable of creating the permissive atmosphere which children need for the fullest growth as young *persons* developing through the medium of the school curriculum.

The atmosphere in a classroom in which the teacher is warm and accepting in his relation with the pupils, while, at the same time, setting limits and providing needed direction, frees children from the need of building defensive adjustments to adult authority. Thus, their energies are released to accomplish tasks that they need and want to tackle and carry through to successful completion.

PROVIDING OPTIMUM CONDITIONS FOR LEARNING

The teacher, in his capacity of specialist, accepts the task of creating optimum learning conditions in his classroom. Keeping in mind that the curriculum is a means of pupil growth rather than a race to be run or a series of breath-taking hurdles to be taken, he plans his teaching so that skills may be acquired with the greatest possible economy of effort, and the learning of necessary facts may also be accomplished quickly and efficiently. Toward this end, *motivation* is of prime significance. When the curriculum is rich and well selected, with children's spontaneous interests in mind, motivation is comparatively easy in the case of well-adjusted pupils. Reading and writing and figuring and memorizing have meaning for the pupil in the good modern school because they are appreciated as means toward any number of interesting ends.

In a school of this sort, the strain of competition is kept at a minimum; pupils are interested in beating their own records rather than in excelling in comparison with their classmates. For instance, keeping a graph to show individual growth in arithmetic skills, keeping a list of the words one *needs* to practice, matching one's handwriting against a scale developed to show what is acceptable handwriting at various grade levels, noting that one has in hand the facts needed to participate in a good discussion, all these activities build one's sense of personal competence, as an individual, not one's excellence in comparison with the boy in the next seat. Personal growth in the power to use skills toward interesting ends becomes *motive* in itself.

However, the best conceivable curriculum includes some teacher-set goals which do not appeal to the average healthy child, and every teacher will number among his pupils some individuals who become disturbed over their learning tasks. Therefore, a good teacher needs to use ingenuity in providing wholesome motivation that is not the ideal motivation created by the pupil's individual drive toward learning. Bearing in mind that the whole child is involved in every learning situation, the teacher seeks for motivations appealing to as many facets of child interest as possible.

Similarly, being aware that learning goes on best in situations which have meaning for the learner and therefore help him to grasp relationships, the teacher will seek for motivations inherent in, or closely related to, the lesson to be learned. Learning to write a friendly letter, for instance, may not be intrinsically interesting to many ten-year-old pupils; but corresponding with a fifth-grade pupil in Hawaii or Mexico or Alaska is found to be very interesting indeed, if the teacher has previously arranged things so that answers are assured. Strictly speaking, the letter-writing activity does not spring from the youngsters' great desire to write acceptable letters; the teacher has set the stage and supplied the motivation. But he has appealed to genuine interest in receiving mail from far-off places as well as to pleasure in talking about one's own activities in the course of a "friendly" letter. Standards of good letter writing are invoked, since one would wish to show how well the fifth grade in Springtown could communicate with its peers in Nome or Honolulu. Form becomes important to the letter writers, as do vivid description and clear explanation.

In contrast to a teacher-instigated motivation of this sort, the following plan may be considered: the three fifth grades and three sixth grades in a large school are motivated through a contest. The best letters produced following three weeks of intensive study of letter writing are to be exhibited in a case in the entrance hall of the school.

In the first instance, writing to peer groups in a far-distant community, attention is directed, above all, toward *communication* for its own sake. Writing clearly and vividly is an end in itself, because the writer wants to make something clear to his reader. Exhibitions of well-written letters do not stress lively communication to a bona fide reader, which is the one reason for writing friendly letters. The goals set by the second plan are unrelated and confusing: to write a good letter, to have this letter exhibited. In the first case they are merged; a "good" letter is seen to be one which rewards the writer by pleasing the reader and, incidentally, by the receipt of an answer. The exhibition is an artificial motivation, one which tends to confuse and to arouse envy or feelings of inadequacy on the part of the contestants. The communication project provides an integrated experience; literally, it "makes sense" and provides for genuine growth on the part of the participants.

Learning is facilitated by clear assignment of what is to be learned. In the modern school, the "assignment" is not teacher imposed in the sense in which it was formerly; class and teacher together participate in assigning to the fullest extent practicable. On the other hand, it is the teacher's responsibility to see that children have a clear understanding of what is expected of them; he must present novel situations and tasks in such fashion that his pupils' impressions are vivid and sharp. Unfortunately, "I don't know what it's all about" and "I don't know what he means" are still too frequently heard comments from students of all ages. Sometimes this fogginess is bred by the inner confusion of the pupil, confusion unrelated to school work. Sometimes it is a cover for insecurity or feelings of inadequacy. In any case, it is the concern of the teacher to work patiently and carefully for greater clarity.

A certain amount of repetition with attention is essential in learning. Some pupils need much less practice than do others; individual pupils, because of differences in interest, may require more drill in connection with some learning tasks than others. This is the laborious aspect of learning, a bit of reality that must be coped with by the school child with the guidance of his teacher. In the modern school, stress is laid upon teaching children how to study; school study hours, competently supervised, have largely replaced the imposed homework which was a family nightmare a generation ago. The child of school age needs the experience of harnessing his energy and industry to worthwhile tasks. He likes to do "hard" things, provided he is confident in his ability to carry them through. In the building of confidence his teacher plays an important role: gone are the days when Mary took her long-division examples home so that the family could help her when her teacher had failed to do so. It is also recognized now that no more repetitious drudgery should be imposed than is necessary for effective learning. Time was when the child who "caught on" quickly to a new process in arithmetic was allowed to do ten extra problems while his class-mate, who had difficulty in catching on, did one. Careful study of learning problems and how to cope with them has informed teachers that the fast learner is *not* a careless learner and does not need to repeat what he already knows ten or a dozen times. The slow learner, however, needs incentive and guidance in carrying through the repetitions he requires for adequate mastery.

Studying Pupil Progress

Like all other classroom undertakings, evaluating pupil progress should be a joint undertaking. Children who have a fine rapport with their teacher can contribute much to the adult's understanding of where difficulties lie. However, it is the teacher's job to use all that he knows about how people learn to help his class toward maximum achievement in learning and to help individuals cope with their own peculiar learning difficulties. In this classroom experimentation, he is as rigorously careful and objective as the experimenter in a laboratory should be in the setting up of experimental situations and the evaluation of results. But the teacher considers what he thus learns in the context of all the other facts in his possession concerning this group or this individual pupil. Also, he regards the pupil or the group with warm friendliness, even while he reviews the results of his teaching with a chilly scientific gaze. Children require this warmth if they are to grow as individual personalities through their participation in the school's curriculum.

Individuals not only differ vastly in the rate at which they learn and the ease with which they accomplish various learning tasks, they also vary in the methods of work characteristic of each of them. For every individual there is an optimum moment at which to introduce new clues toward helping him solve a given problem, an optimum distribution of practice to aid him in memorizing facts or perfecting a motor skill, a certain degree of "overlearning," or practice in excess of what is needed to perfect a performance for the moment, to assure retention of the facts or skills. Indeed, there is also a better or best method of learning to read or to spell or to reproduce what is read or to communicate what is known, varying somewhat with each individual pupil. Unless the most progressive method be described as the one based upon the most careful study of individual learners and their differences, the "latest" method is not thereby the best. Secure children, free from disturbing conflicts and thereby free to divert all their energy to their school tasks during schooltime, can adapt themselves readily to learning by any psychologically sound method; indeed, they occasionally make amazing progress when subjected to teaching methods which are indefensible according to modern texts on pedagogy. But the unhappy or disturbed pupil can hardly succeed unless his difficulties are understood, anticipated, and to some extent removed through adept teaching. Likewise the retarded pupil, slow in performing the tasks which require abstract thinking and the mastery of many symbols, may become the hopelessly discouraged learner unless through skillful evaluation and resourceful adaptation of method his teacher is able to give him maximum help.

School Experience in the Development of Values

Children's values, like the values of adults, determine the goals toward which they strive. Values are directly related to needs, and the basic needs for physical comfort, security, love, personal achievement, recognition, and self-realization are common to all. But although the needs to which they are related are common to everyone, values are unique "ideas-tied-to-feelings" wrought in the course of each individual's experience. Our highly individual values determine our perception of meanings in our experiences and therefore become the bases for our decisions as to how to go about satisfying our present needs. The child's conduct is modified by these values. For instance, the five-year-old, as the result of his experiences, may come to value his mother's approval more than the candy in the box he has been told not to touch; the older child may value the approval of his teacher and his classmates so much that he will forgo part of his playtime in order to complete the puppet he is making, the "research" he has undertaken toward the answering of an important question, or the part he is learning for next week's assembly. Later he may come to value a piece of work well done for the sheer joy of accomplishment, at which point he is well on the road toward self-realization.

In this all-important process of value formation, school experiences play an important part. School takes the child on a well-guided tour into areas beyond the home circle; in the course of this excursion, many of the values learned at home will be reinforced, some will be challenged or shaken, others will perhaps be discarded. Above all, if teachers are competent and the curriculum is rich, the child will recognize new values, and he will learn the ability to criticize and, above all, to suspend judgment until the evidence is in. Values are the criticized "goods" of living: a drink of water is a good when you are thirsty, but, if you are on a hike with a group, you may find it best to pass up this good for the more "valuable" one of behaving like a good sport or a good hiker. Making the trip on schedule is thus given a higher value than satisfying your thirst the first moment you are thirsty.

Values determine the role which each individual plays in the family, the school, the community, and the work of the world. The first setting, the family, invariably affects the role played in the other settings. Conversely, although probably the effect can never be so profound as in the reverse order, the roles taken outside the home change the one assumed at home. During the school years, the child is growing toward a sense of his own identity which, if he is happy and vigorous, will make it possible for him to play a consistent role, that is, his own proper one, in all situations. The school, as a specially constituted and planned environment offering experiences beyond that which the home and the community in general can offer, serves as a testing ground in which the child may develop and strengthen his sense of identity. It is hardly necessary to add that the school as a special agency can be helpful to children in strengthening identity and preventing "role diffusion," or the development of divided selves to whom identity and consistency are foreign, only to the degree that its educational activities serve and are served by the community of which it is a part.

SUMMARY

In addition to its basic aim, which is to provide an environment in which children may learn democratic living, the school has a special task in connection with developing a rich curriculum through which children will learn the facts and skills that they need to participate successfully in the manifold activities of a modern community. The acquisition of these facts and skills presents difficulties; good teaching, based on known facts about the psychology of learning, is required to help pupils overcome these difficulties. Good teaching includes constant recognition of the fact that the whole child is involved in every single experience. It also includes the maintenance of a wholesome classroom "climate," permissive but providing clear-cut limits for group and individual activities. Likewise, successful teaching is based upon sound psychological principles developed through a prior study of the learning process. Constant evaluation and adaptation of method to the needs of individual pupils are also important.

The elementary school child is in the process of developing a sense of identity, of consistent, rather than diversified, role-playing in home, school, and community. Under the guidance of well-trained and skillful teachers, the experiences provided through the school curriculum are a special means of personal growth through the development and clarification of individual values.

CHAPTER XIII

Pubescent Changes

> Puberty, from the Latin word *pubertas,* meaning "the age of manhood," is a period in the development of the individual that is characterized above all by the beginning of the functioning of the sex organs. It is the time when the reproductive organs mature.
>
> ELIZABETH B. HURLOCK[1]

THE SOCIAL SIGNIFICANCE OF PUBESCENCE

The classification "pubescent" cuts across age and grade and intellectual maturity groups because the range of age at which normal boys and girls reach this point in the course of their development covers a span of years. The physiological changes that occur at pubescence, changes that make it physically possible to beget and bear children, are the introduction to the period of adolescence.

Social scientists have demonstrated that human societies universally recognize the crucial import of puberty both to the individual and to the society itself and, accordingly, have developed a rich variety of ritual, ordeal, and ceremony designed to impress upon young persons that they are now ready to assume duties and responsibilities approximating those of adults.

In modern times, the qualities of *Sturm und Drang* of the pubescent and postpubescent periods have been noted by novelists, psychologists, sociologists, and bewildered, exasperated, or alarmed parents and other guardians of youth. The definite and at times very elaborate cultural formulas through which earlier and more primitive societies have dealt with their "baby adults" are lacking in our complex social organizations, and the problem of initiating adolescent children into the responsibilities of our hectic adult lives is thus a difficult one.

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[1] Elizabeth B. Hurlock, *Adolescent Development,* p. 23.

Some experts in the field have studied what *society* does to make of pubescence, this entirely normal stage of growth, a sociological problem. Margaret Mead,[2] a pioneer in the study of primitive youth, has underlined especially the significance of prevailing cultural mores in determining whether or not sexual maturing precipitates a developmental crisis. At the same time, psychologists and other students of child development in recent years have studied diligently the various phenomena of growth and behavior characteristic of pubescent youth, in order to understand the import of these for social adjustment. The net result of these various studies so far serves to reinforce the current hypothesis that behavior is the outcome not of physical causes nor psychological causes nor yet sociological causes, *per se*, but rather the result of "psycho- *and* somatic, psycho- *and* social, and inter-personal factors." [3] With this in mind, we shall now review some of the important characteristics of pubescent children in our contemporary world.

PHYSICAL CHANGES AT PUBERTY

Growth in Weight and Height

The "adolescent growth spurt," which begins simultaneously with pubescent changes in sex organs and other so-called secondary sex characteristics, is the second of two accelerated growth phases in the life of an individual, the first of which occurs during the ten lunar months of prenatal development. This second accelerated period is longer than the first but is, nevertheless, comparatively short, extending from a year or two before puberty to from six months to a year after sex maturation; in describing it, one investigator[4] comments that "the adolescent growth spurt turns out to be a preadolescent phenomenon which reaches its climax not at any one age, but as early as age ten or as late as age fourteen." This statement refers to the growth spurt in normal girls. In the case of boys, the average ages are about two years later. The comparison between the two sexes is shown in Fig. 1.[5]

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[2] Margaret Mead, *Coming of Age in Samoa, Growing Up in New Guinea, Male and Female.*

[3] Cf. Erik Homburger Erikson, *Childhood and Society*, pp. 19*ff*.

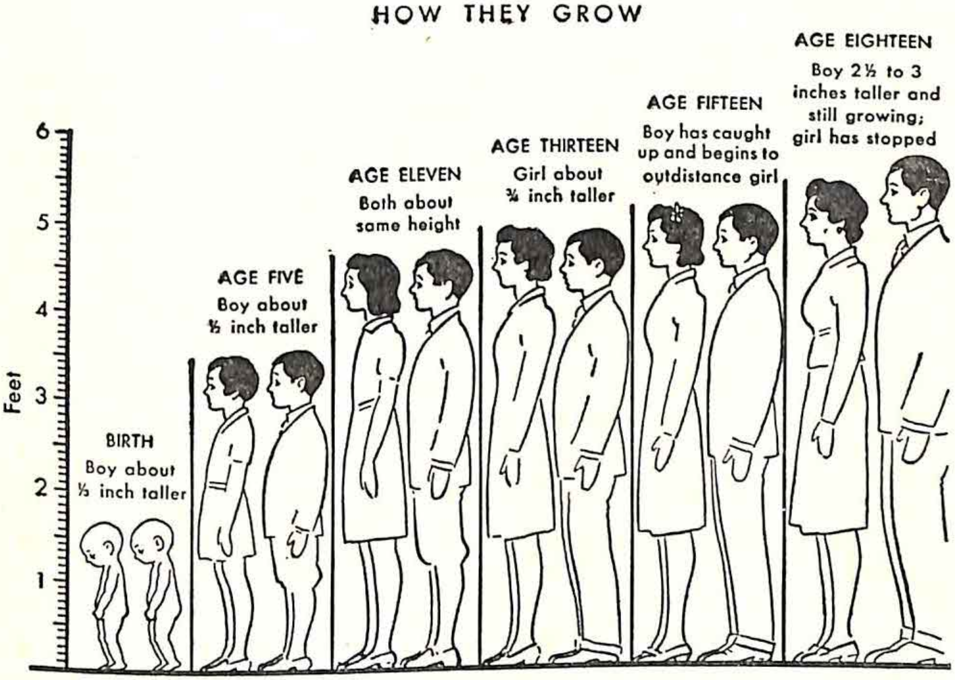

FIG. 1. Periods of slow and accelerated growth for boys and girls. (*A. Scheinfeld, Women and Men, Harcourt, Brace and Company, Inc., New York,* 1943. *Used by permission.*)

There are wide differences in growth patterns between individuals; faster maturing individuals have greater "spurts" and attain adult proportions sooner than later maturing persons. Early maturing children have been found to be consistently bigger at six or

[4] Frank K. Shuttleworth, Sexual maturation and the physical growth of girls, *Monogr. Soc. Res. Child Develpm.,* Vol. 2, No. 5.

[5] Hurlock, *op. cit.,* p. 68.

seven years and progressively so up to the age of eleven and a half or twelve years among girls and fourteen or fifteen years among boys. The range of size of boys of the same chronological age, fifteen years, is shown in Fig. 2.[6] The little boy and little girl for whom parents and teachers have been concerned thus grow to adult size within two short years which are not parallel in time.

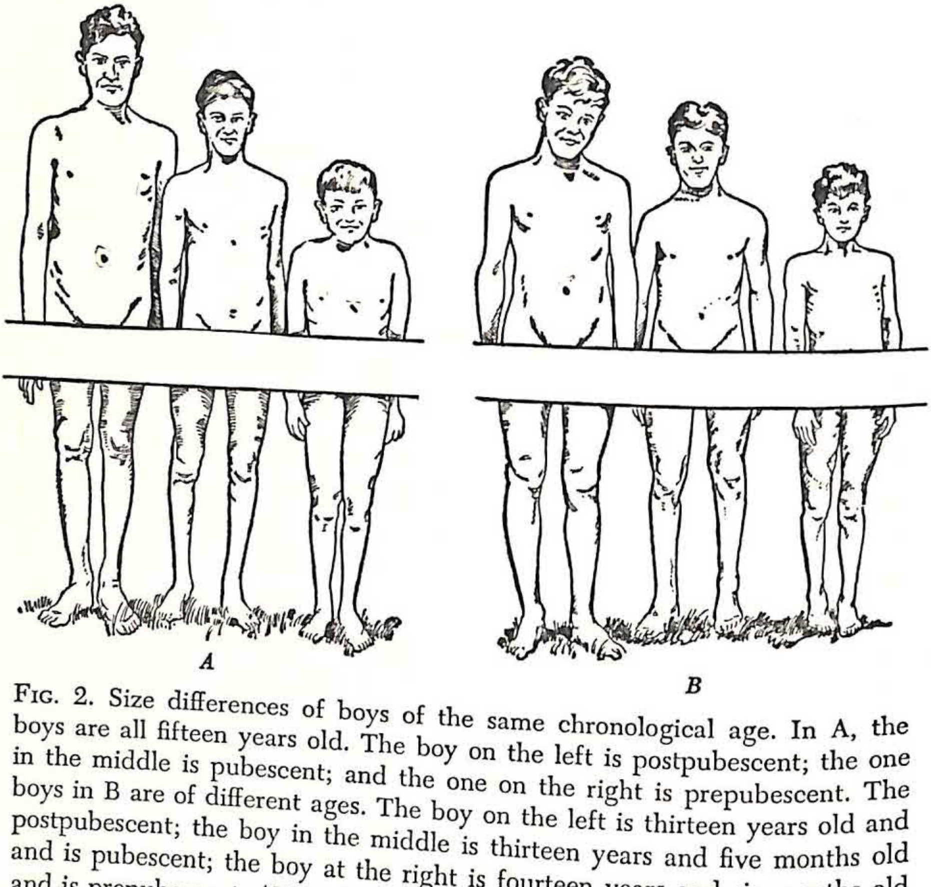

FIG. 2. Size differences of boys of the same chronological age. In A, the boys are all fifteen years old. The boy on the left is postpubescent; the one in the middle is pubescent; and the one on the right is prepubescent. The boys in B are of different ages. The boy on the left is thirteen years old and postpubescent; the boy in the middle is thirteen years and five months old and is pubescent; the boy at the right is fourteen years and six months old and is prepubescent. (*H. S. Dimock, Rediscovering the Adolescent, Association Press, New York*, 1937. *Used by permission.*)

Because of rapid growth in bones and muscles, they also gain sharply in weight, again not at the same moment. They lose the chubbiness of childhood and, although the hips and breasts of the girl show an increase in fat, these pubescents often appear scrawny as a result of enlarging bony framework. The same enlarging framework produces bigger hands and feet, frequently so disproportionately large that they lend an extra note of awkwardness to the gangling youth. Growing muscles result in growing strength; physical energy and vitality reach a peak in healthy adolescence. The boy, especially, senses his new physical prowess which he must learn to discipline and control. Fortunately, both boys and girls normally delight in athletics, by means of which they develop and legitimately "show off" their increasing growth and graceful skill. A community sensitive to the needs of youth provides rich opportunity for the training and exhibition of athletic performance. Psychologically mature parents accept the "loss" of little boys and girls and welcome physically grown sons and daughters.

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[6] *Ibid.*, p. 106.

The Effect of Growth Variations upon the Self-perception and Social Behavior of Pubescent Boys and Girls

The reader can probably fill in much of this section for himself. Both the figures referred to previously and the life experiences of intelligent people suggest the effect upon boy or girl of being at either extreme of the growth curve for the young person's chronological age. The smaller child feels himself a runt; the larger child is awkward and self-conscious because of his size. In girls, the fact of early or late menstruation is significant for personality development; the girl who menstruates early is frequently overconscious of the supposed stigma of staining and of the need for circumspect behavior in the presence of girls who are her age peers. The girl whose menstruation is delayed to the end of the "normal" period or, worse, somewhat beyond this period, experiences fear that she will never mature and feelings of inferiority with respect to her associates. Boys are often much disturbed and humiliated if the gonads are small and immature in comparison with those of other boys at school or in camp; seminal emissions disturb the boy who matures early to a degree varying from amazement to horror accompanied by feelings of guilt.

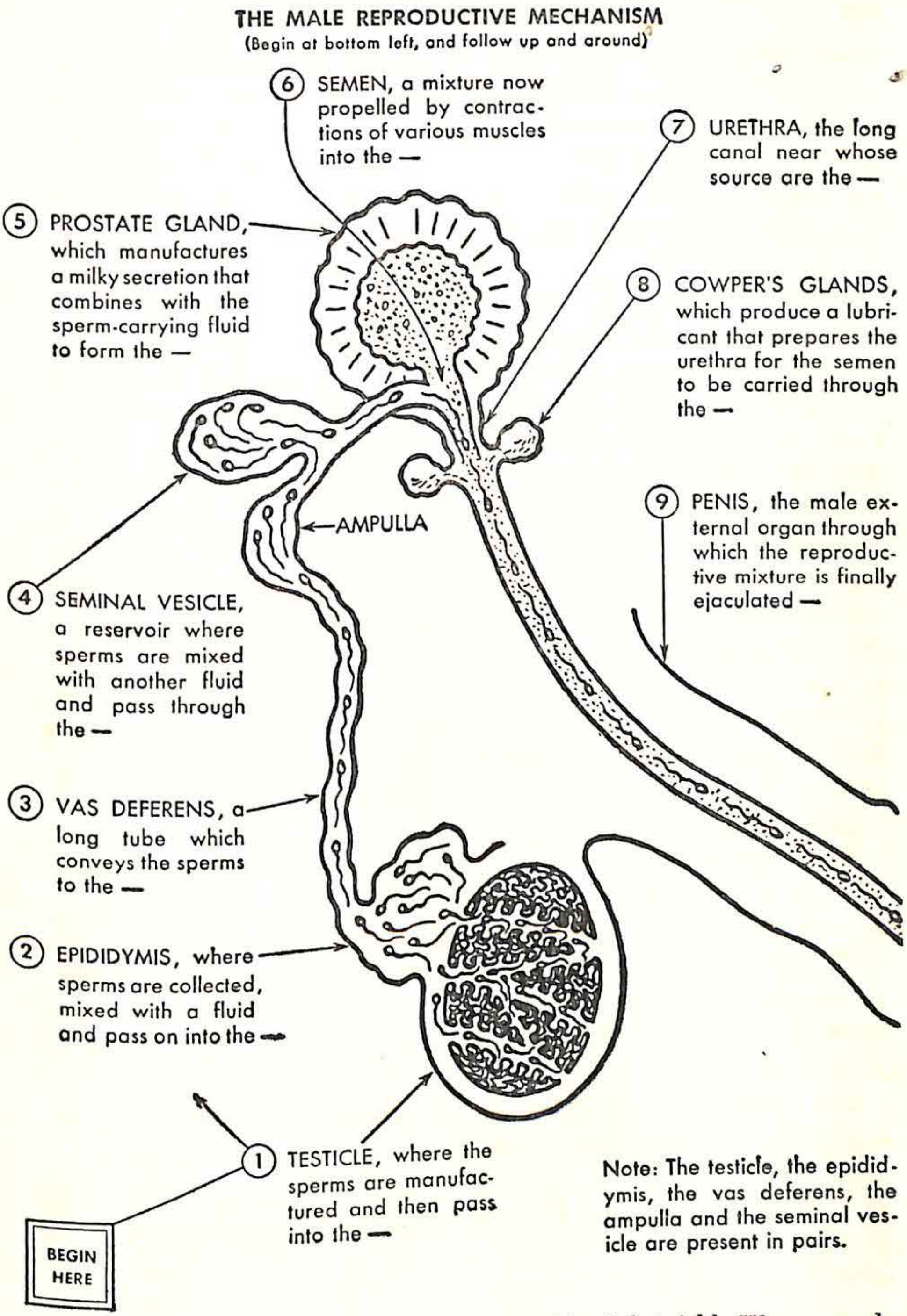
The fact that girls on an average mature two years earlier than boys may give rise to awkwardness in social relations between the sexes. Twelve-year-old Martha wants to wear lipstick, array herself in formal dance dresses, and go to "grown-up" parties, while her steady boy friend may find formal dress a bore and prefers digging for night crawlers to dancing. Martha sees herself as a successful, desirable "date," while John wants to be a "regular fella" and is doubtful of his adequacy as a date.

Primary Sex Characteristics

The primary sex characteristics are the gonads—testes and ovaries—which are small in size and functionally immature in childhood and which, with the onset of puberty, grow appreciably, becoming quite conspicuous as they develop the capacity to produce sex cells. The moment at which functional maturity appears is the true dividing line between sexually immature childhood and sexually mature youth. The functions of these male and female sex organs are identical in one respect: they produce the sex cells concerned in reproduction. The male sex cells are the spermatozoa; the female, the ova. In the case of the male, the secondary sex organs have a further function, that of introducing the sperm cells into the female so that they can unite with an egg cell and fertilize it, thus starting a new individual on his life cycle. The female secondary sex organs also have the function of protecting and nourishing the fertilized ovum.

Since the functions of the male and female sex organs differ, their structure also differs. The male sex structures are made up of both external and internal genitalia. On the outside of the body are the *penis* and the *scrotum*, the latter a sac containing the *testes;* inside the body are the *vas deferens* and its parts, the *prostate* gland and the *urethra.* Each of these has its own part to play in reproduction (see Fig. 3).

The female sex organs are mostly in the interior of the body; therefore their rapid growth at puberty is not so obvious as in the case of the male organs. However, in the prepuberty years, the growth of the girl's reproductive organs results in the enlargement of the abdominal cavity, which is frequently a source of embarrassment and worry to the developing child. When the bony framework enlarges, there is enough room in the cavity for the enlarged



THE MALE REPRODUCTIVE MECHANISM

(Begin at bottom left, and follow up and around)

① TESTICLE, where the sperms are manufactured and then pass into the —

② EPIDIDYMIS, where sperms are collected, mixed with a fluid and pass on into the —

③ VAS DEFERENS, a long tube which conveys the sperms to the —

④ SEMINAL VESICLE, a reservoir where sperms are mixed with another fluid and pass through the —

⑤ PROSTATE GLAND, which manufactures a milky secretion that combines with the sperm-carrying fluid to form the —

⑥ SEMEN, a mixture now propelled by contractions of various muscles into the —

⑦ URETHRA, the long canal near whose source are the —

⑧ COWPER'S GLANDS, which produce a lubricant that prepares the urethra for the semen to be carried through the —

⑨ PENIS, the male external organ through which the reproductive mixture is finally ejaculated —

Note: The testicle, the epididymis, the vas deferens, the ampulla and the seminal vesicle are present in pairs.

Fig. 3. The male reproductive mechanism. (*A. Scheinfeld, Women and Men, Harcourt, Brace and Company, Inc., New York,* 1943. *Used by permission.*)

organs, so the abdominal wall flattens, and the distressing "tummy" vanishes. The girl's internal genitalia consist of the ovaries, lined in childhood with thousands of microscopic egg cells, which begin to ripen at puberty, one approximately every twenty-eight days until the menopause, or change of life period, in the late forties or early fifties of the woman's life; the fallopian tubes; and the uterus (see Fig. 4).[7]

The *menarche,* or first menstruation, in which the first ripened ovum is discharged, is the girl's mark of sexual maturity. The menstrual flow is not, as some people erroneously suppose, mainly a flow of blood. Actually, only a very little blood, released from the capillaries of the uterus lining, is lost each four- or five-day period. The remaining ingredients of the menstrual fluid are mucus, similar to that discharged from the nose, lime, and other materials intended for the nourishment of the embryo should fertilization take place, and broken-down cell tissue. Irregularity of the *menses* is common during the early months of maturity; so are physical discomfort or actual pain. Only when headache, cramps, and other ailments are so severe that the girl is unable to go about her daily routine is the discomfort any cause for concern.

No phenomenon as distinct and dramatic as the menarche occurs to punctuate the physical maturation of boys. The indication upon which the majority of studies dealing with the age at which boys mature report findings is pigmentation of pubic hair: pigmented straight pubic hair is given as the single best index of pubescence; curly pigmented hair shows that the youth is postpubescent. The boy is sexually mature when there are spermatozoa in his semen, that is, when he is capable of producing offspring. Only microscopic examination of semen can determine this capability beyond doubt, and studies to date have been too limited in subjects to establish norms for chronological ages.[8]

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[7] See *ibid.*, pp. 39*ff.*

[8] *Ibid.*, pp. 28–35. See also Wayne Dennis, "The Adolescent," in Leonard Carmichael (ed.), *Manual of Child Psychology*, pp. 640ff.

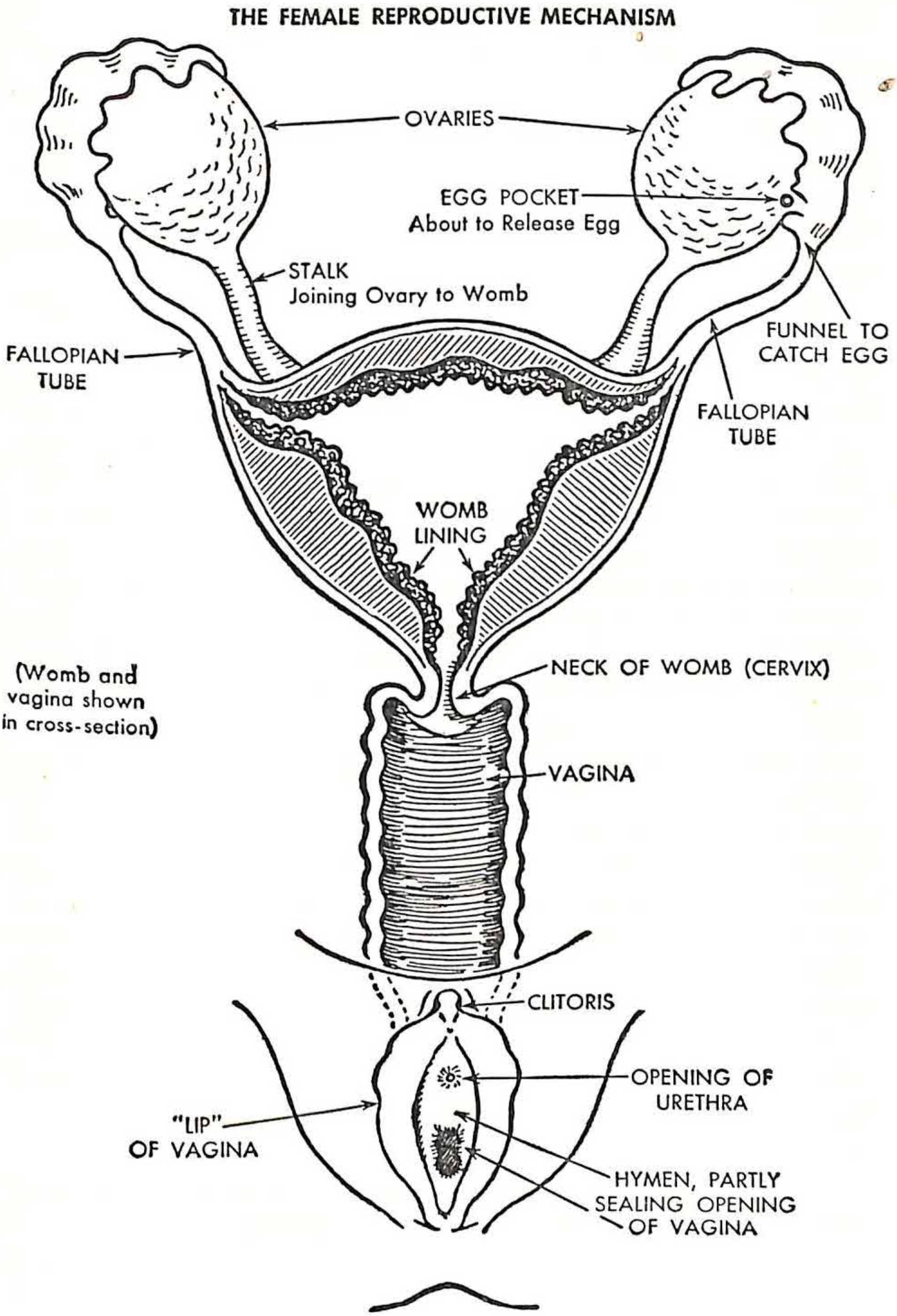

FIG. 4. The female reproductive mechanism. (*A. Scheinfeld, Women and Men, Harcourt, Brace and Company, Inc., New York,* 1943. *Used by permission.*)

Secondary Sex Characteristics

The secretions from the gonads, or sex glands, not only cause the growth of the secondary sex organs, but they also precipitate the development of other secondary sex characteristics.

In girls, breast development is one of the earliest indications of coming sexual maturity. Breast development goes through the following stages: the "papilla" stage of early childhood, the "bud" stage, which is achieved by the tenth or eleventh year, the "primary breast stage," and the "secondary," or "mature breast," stage. The breasts of the very little girl show only a slight elevation of the papilla, or nipple. This is the papilla stage. Somewhat later, the nipple and the surrounding areola are more distinctly elevated, indicating the bud phase. As puberty approaches, the fat underlying and immediately surrounding the papilla increases, raising the areola well above the level of the chest wall. As this development continues, the nipple protrudes more and the breast is rounded, representing the mature breast stage.

PERCENTAGE AT EVERY AGE GROUP,
SHOWING PHASE OF SEXUAL DEVELOPMENT IN BOYS

Age group, years	Ejaculation, per cent	Voice change, per cent	Nocturnal emission, per cent	Pubic hair, per cent
10	1.8	0.3	0.3	0.3
11	6.9	5.6	3.7	8.4
12	14.1	20.5	5.3	27.1
13	33.6	40.0	17.4	36.1
14	30.9	26.0	12.9	23.8
15	7.8	5.5	13.9	3.3
16	4.9	2.0	16.0	1.0

SOURCE: Glenn V. Ramsey, The sexual development of boys, *Amer. J. Psychol.*, Vol. 56, 1943, p. 217. Quoted by permission of the *American Journal of Psychology.*

In girls, too, a little pubic hair appears at puberty, which is at first scanty and straight. The first growth is suddenly replaced at pubescence by a luxurious one, with dark pigmentation and curly texture. Axillary hair, or hair under the arms, appears after the menarche, and a slight down is also noticeable on the lower lip at this time. Meanwhile, other secondary changes are taking place: increasing fat on breasts and hips, the changing from the shrill voice of the little girl to the lower, more melodious one of the older girl.

There are wide differences among individuals with respect to the appearance of secondary sex characteristics among boys. However, the traits themselves conform to a predictable pattern. The table above shows the different phases of sex development reported by G. V. Ramsey, based on a study of 291 boys from middle and upper socioeconomic groups in a Middle Western city.

Social and Emotional Traits at Early Adolescence

The teacher of pubescent children will do well to make and keep a set of resolutions something like the following:

> I will realize that hidden emotions often dictate behavior and act accordingly.
>
> I will react to the emotional adolescent wholesomely and helpfully.[9]

The pubescents and the young adolescent children in the upper elementary and junior high school grades may be very difficult to accept in the course of a busy teaching day. Parents, too, often find their older boys and girls more difficult to cope with than the same children two and three years back. As in the case of physical development, so with emotional development, many studies have been made in recent years to try to understand the young adolescent level of emotional maturity. Since these older subjects are less naïve than younger children, there have been many difficulties in gathering sound data, but, in consideration of the results at hand, investigators are agreed upon the following generalizations: emotions accompanying sexual "growing up" are intense, relatively unstable, often uncontrolled in their expression, frequently take the form of "moods," and frequently are expressed as sentiments.

Little children, it will be recalled from earlier discussions, lack gradations or varying intensities in their emotions. The baby is

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[9] Marguerite Malm and Olin G. Jamison, *Adolescence*, p. 224.

"mad all over" or "glad all over," no matter how slight the stimulus to "madness" or gladness may be. As the child grows, he learns to suit his emotions to the stimuli which arouse them. In this growing-up process, social approval and disapproval play a large part and, owing to his craving for approval, by the end of childhood the average youngster has learned to control his emotional expressions. Comes puberty, and glandular factors [10] plus social circumstances combine to make emotionality very intense, and the young adolescent tends to give way to his strong feelings and lose control of his conduct. Babies swing quickly from joy to anger, from despair to great merriment. By the end of childhood, emotions are stable in the case of healthy children; such ups and downs as do occur are occasioned by physical health or illness rather than the environmental conditions or self-criticism.

Adolescents, on the contrary, shift easily from elation, hope, or joy to the depths of gloomy despair. The adolescent also gives vent to his emotions in a manner trying to many adults. Girls giggle in response to happenings which give them pleasure or to cover embarrassment; they cry easily. Adolescent boys develop various mannerisms to express pleasure; anything from a sheepish grin to twisting the gloves or handkerchief may be indicative of pleasure. Ill feelings are generally indicated by heavy sulks or swearing audibly or *sotto voce*. These irritating mannerisms are at their peak shortly after pubescence; the older adolescent learns to control them or to replace them by more socially acceptable expressions. Moods, or "long-drawn-out emotions," are therefore characteristic of the older, rather than the younger, adolescent; the older boy or girl bottles up his feelings in his effort to control emotional responses. "The better the emotional control of the adolescent, the moodier he will be," writes Hurlock.[11] He shows his moodiness by lack of interest in his surroundings, physical and social, by frequent gruffness, surliness, and rudeness as a result of indifference to people; sometimes by extreme laziness or habitual indecision. Adolescent moodiness is hard for adults and younger children to bear, both at home and in school.

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[10] Hurlock, *op. cit.*, pp. 96*ff.*

[11] *Ibid.*, p. 115.

The student of child development should bear in mind that moodiness is a normal adolescent trait and should be ready also to accept shifts in mood and intensity of emotion which are not unlike the emotionality of the manic-depressive who classifies as a mentally ill person. Hurlock and other authorities remind us, however, that the normal adolescent, in contrast to the sick person, shows shifts of mood in direct relation to change of circumstance. For instance, he is extravagantly happy over success in an undertaking, with resulting elation of mood. On the other hand, homesickness or failure in schoolwork may create a mood of exaggerated depression.

Sentiment or emotion combined with an ideal, such as patriotism, family pride, or religious allegiance, or, quite commonly, love for an individual whom the child idealizes, is present in the older child, at which time it is most frequently group sentiment, that is, loyalty to school, club, church, or country. With pubescence, group sentiment gives place to personal sentiment, which is, on the whole, stronger. The idealized person arouses very poignant feelings, a series of "crushes" is not infrequent, and the pubescent begins to develop feelings about himself and the role which he as an individual plays in his group. In order to accept himself, he needs social backing and approval just as the very little child needs the affection and support of his parents. The assured, successful child of last year is now a baby adult, facing the problem of establishing his identity, of making himself a person, in a world which is not strictly like the world of childhood. Erik Erikson [12] writes:

> . . . in puberty and adolescence all sameness and continuities relied on earlier are questioned again, because of a rapidity of body growth which equals that of early childhood and because of the entirely new addition of genital maturity. The growing and developing youths, faced with the physiological revolution within them, are now primarily concerned with *what they appear to be in the eyes of others as compared with what they feel they are. . . .*

They are further concerned with learning how to use the roles and skills learned in their earlier years toward coping with their new problems. The integration which takes place in early adolescence is more than the simple sum of past experiences and adjustments; it is the adjustment of a new and different person to new and different roles, an adjustment which at the same time maintains continuity with the competent, self-accepting child from which this new person has developed. This adjustment, called by Erikson a "sense of ego identity," is the main developmental task of postpubescence.

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[12] Erikson, *op. cit.*, p. 228. Italics inserted.

MEETING THE NEEDS OF PUBESCENTS

The needs of young adolescents have an urgency about them not unlike those of the preschool baby. Perhaps we should admit, too, that some of our adult habits of thinking and certain of our social conventions make it more difficult to respond to the needs of the pubescent boy and girl than to those of the "cute" two-year-old. Admitting, as always, that divisions and categories are artificial in the discussion of living organisms, for purposes of orderly treatment we may adopt the following headings: the need for love and understanding in the family; the need for adequate, accurate information about physical and emotional changes, both in advance of, and concurrently with, these changes; the need for commensurate freedom and responsibility; the need for vocational information; the need for personal guidance in the accomplishment of heterosexual adjustment and the cultivation of worthy sentiments.

The Need for Love and Understanding in the Family

Probably most people reading this book will be ready to admit that they were "headaches" to their families and themselves at some point during the process of growing up sexually. A glance over the emotional characteristics of the young person at this stage will explain why. Emotionality, moodiness, instability, bad manners, all normal manifestations of early adolescence, are trying to live with. Perhaps the instability factor causes the most friction: Junior is a calm, reasonable, sensible adult on Monday; on Tuesday you can't reason with him at all, for he has regressed to the stage of unmitigated brat. The adults in the home will do well to recall that the course of development is spiral, that growing things seem to regress seriously at times but, if they are healthy, they subsequently swing back to a level slightly higher than the one from which they regress. Junior does "grow up"; as time goes on he is more steadily a charming, interesting, helpful young adult. Meanwhile, Junior is struggling with the very difficult job of establishing ego identity, or "seeing himself as others see him" and staunchly accepting the vision.

A father who identifies with him and accepts him as a peer as much of the time as possible is most important to him as friend, counselor, and ideal. A mother who is genuinely proud of his growing success and independence, who loves him and shows her love through helping him develop self-love, likewise helps him respect and appreciate girls and feel secure in their presence. Siblings who accept him and loyally defend him against all extra-family criticism strengthen his sense of identity and competence.

When parents are not themselves fully mature persons (and who is an exponent of complete ego integrity?), it is difficult to meet Junior's needs adequately, more difficult than it was when he was little. Adolescent Junior can easily become a puzzle, a threat, and a worry as he figuratively treads upon parental heels in growing to man's estate. For one thing, his behavior "reflects" upon his home training, and the behavior is sometimes deplorable. For another thing, his bids for attention become wearisome, and after all he *should* "act his age." Father recalls that at Junior's age he (Father) was "putting himself through school." Mother remembers how respectful her brothers were to *her* mother. Above all, parents of growing boys and girls have to accept them as young adults, *critical* young adults, who are now sharing their home, and it behooves them to stand up under criticism without unfair resentment. Too, especially the *oldest* child's first formal party brings a pang of recognition that parents are growing older. All in all, it is a difficult time, and yet Junior acutely needs his parents' affection, interest, and pride in him.

The Need for Adequate Information

The "prepubescent period," or the months during which both primary and secondary sex characteristics are developing, is a period of physical discomfort, which may be accompanied by painful anxiety. Adults can greatly reduce the child's anxiety through seeing to it that he is informed of imminent changes before these changes occur. The information comes best when it is given casually and a little at a time. Even the mere acceleration of physical growth may be a worry to the youngster, especially when thoughtless grown people say, "I'll have to put a brick on your head so that you will stop growing," or offer some other feeble witticism. The youngster may really think he isn't going to stop growing and regard his height and weight increases with alarm. He needs to be assured that his increase in stature is right and a source of rejoicing.

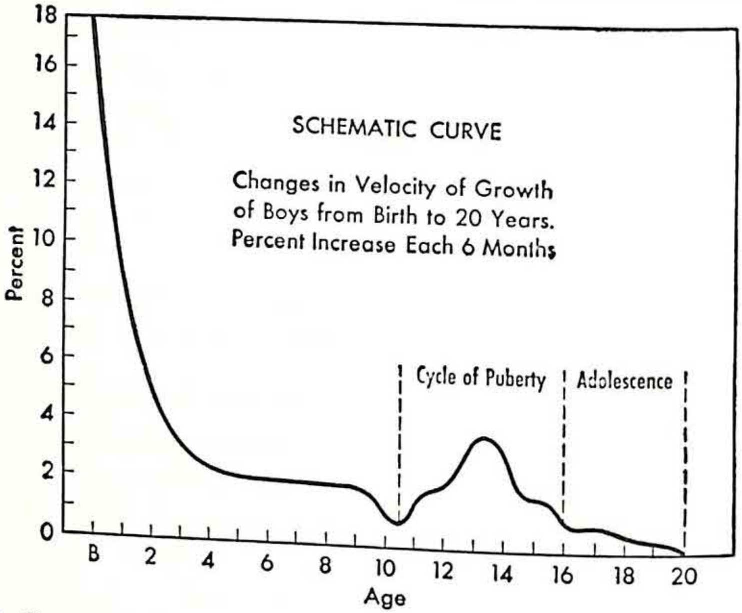

FIG. 5. Curve showing changes in velocity of growth from birth to twenty years. (*L. H. Meek, The Personal-Social Development of Boys and Girls with Implications for Secondary Education, Progressive Education Association, New York,* 1940. *Used by permission.*)

The little girl whose breasts are changing from their baby appearance needs to know in advance that they will enlarge considerably in coming months. The boy should receive accurate information about his sex organs, about ejaculations and what they mean, about nocturnal emissions and their significance, in advance of what may be disturbing phenomena and in competition with the misinformation he is most probably receiving from his peers. One of the first "modern" discussions of sex, an eighteenth-century treatise on the subject, concludes every item of instruction with the reflection, "This is most curious and wonderful." It would be well if all "sex education" were given and received in this spirit. Long before the menarche, the little girl should be told of this curious and wonderful phenomenon, so that she may adjust more easily to the physical and social discomfort of this event.

Although pubescence is taken to be equivalent to sexual maturation, it has been shown that conception of a child cannot take place until several months after the menarche. Very early conceptions are accompanied by high infant and maternal death rates. These facts should be included in the sex education of the growing boy and girl. In short, the pubescent child has a right to all of the facts that will help him to cope with the problem of growing to man's estate. Even the minor misery of a changing voice should be explained as a maturation process, not merely as a wretched joke.

The Need for Commensurate Freedom and Responsibility

This is the crux of the problem of adolescent adjustment to home and community standards of behavior. Hurlock writes: "Too strict parental discipline, too little independence for the adolescent, and a lack of understanding of adolescent interests are the chief trouble makers in the home." [13] While the adolescent in his struggle for identity frequently feels utterly inadequate, in his self-confident moments he yearns for freedom, and he needs freedom if he is to grow up. Characteristically, he dodges responsibility, and the adults guiding him are often at their wit's end in convincing him that freedom and responsibility go together. Should Junior drive the family car until he can contribute to the car's upkeep? He certainly shouldn't drive it until he has a license. What time should Mary come home from a Friday evening date, or should this be up to Mary to decide? Answers to these questions depend upon individual circumstances, but the common goal is to give the child the freedom to find his proper roles and enough responsibility to help him maintain them.

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[13] Hurlock, *op. cit.*, p. 122.

The Need for Vocational Orientation

The achievement of a sense of ego identity requires a sense of continuity between the stage of adolescence and that of childhood. Quoting Erikson, this inner continuity and sameness must be "matched by the sameness and continuity of one's meaning for others, as evidenced in the tangible promise of a 'career.'" [14] The healthy adolescent, who was the successful school child, needs the promise of continued social success in new and different roles. He needs to consider, discuss, and project vocational plans, even though the realization of these may be deferred for a long period of years. He needs to know that there is a place for him in the working community, just as there has always been a place for him in school, and to grow in his confidence that he can fill this place with credit. Vocational information and sympathetic educational and vocational guidance are important ways of meeting these needs.

The Need for Personal Guidance

The achievement of a happy heterosexual adjustment is the main business of growing up and it is a task for which adults can provide only indirect assistance. Sex education of the right sort is one important means of helping the growing boy and girl; so is frank and critical discussion of the conventions governing sex behavior, a discussion in which interested adults take part and the youngsters themselves determine the direction. With adult guidance, the group process can be most helpful to young participants.

Of late years, psychoanalysis has underlined the crucial importance of a good heterosexual adjustment in the life of an individual. The kind of mutuality in a sexual relationship which the pyschoanalyst has in mind can be obtained readily "in classes and cultures which happen to make a casual business of it." In more complex societies gratification is less easily obtained. Erikson [15] puts it this way:

> In more complex societies this mutuality is interfered with by so many factors of health, of tradition, of opportunity, and of temperament, that

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[14] Erikson, *loc. cit.*

[15] Erikson, *op. cit.*, p. 230.

the proper formulation of sexual health would be rather this: A human being should be potentially able to accomplish mutuality of genital orgasm, but he should also be so constituted as to bear frustration in the matter without undue regression wherever considerations of reality and loyalty call for it.

It is the task of the adult to guide the growing youngster in the development of a capacity for intimacy with another while, at the same time, helping him develop sentiments of loyalty and honor which will serve as guides and restraints. The growth of an emotionally rich personality in a society in which legal and "honorable" heterosexual intimacy is deferred for years after such intimacy is individually possible and desirable has peculiar difficulties. These difficulties may be resolved only through intelligence, good will, and involvement with the higher sentiments. Individual purposes are most effectively restrained by wholesome group sanctions.

THE PUBESCENT IN OUR CONTEMPORARY SOCIETY

The student of child development will see that the needs of pubescents are not adequately provided for in our contemporary world. His need for love and affection is not fulfilled in our growing proportion of "broken" homes, nor is it met by the many adults in our midst who have failed to attain emotional maturity and mental health themselves. Information is being given to him more freely and wisely than was the case even a few years ago, but, even here, there is room for improved facilities and techniques. Freedom commensurate with responsibility depends upon the matrix of the home and is closely related to the provision for love and affection. Vocational plans and orientation are beset with uncertainty; the draft, the threat of war, the bogey of depression combine to make a sinister background for vocational aspirations. People competent to guide group progress in the development of wholesome sentiments are few and far between. But, on the positive side, there is a growing understanding of youth's problems and adult shortcomings and a growing desire to learn about Junior's particular problems and accept him for what he is.

The teacher of the upper elementary and junior high school grades, for whom this brief discussion of pubescent changes is most germane, will see the need for recognizing these children and their needs and for helping them over the added hazard of being pubescents in groups in which many or even most of their classmates have not yet reached this eminence. These children will need individual attention directed toward strengthening their self-acceptance and helping them develop the ego identity which is their particular developmental goal.

CHAPTER XIV

Exceptional Children

THE INTELLECTUALLY GIFTED

Lewis Terman,[1] pioneer in the study of mental abilities, describes the gifted child in the following fashion:

> Parentage: Generally superior in cultural and educational background and also in heredity.
>
> Educational achievement: Accelerated about fourteen per cent of his age. In mastery of subject matter he is accelerated about forty-four per cent of his age.
>
> Interests: Many-sided and spontaneous. Learns to read easily, reads more and better books than the average child, and largely educates himself. Makes numerous collections, engages in all kinds of childhood activities, acquires far more knowledge of plays and games than the average child of his years.
>
> Character: Less inclined to boast or overstate his knowledge, more trustworthy when under temptation to cheat, reading preferences, character preferences, and social attitudes are more wholesome than average. Scores higher in emotional stability.

However, this statement is accompanied by the caution that not all gifted children follow this pattern, since, like every group, the gifted one includes individuals of very great variety.

The reportedly superior cultural and educational status of the gifted child's parents, as well as his superior heredity, bring up the crucial and still unanswerable questions of how far heredity and/or superior educational advantages affect the intelligence of individuals. These questions, which will, in all probability, plague the serious student of child development for the rest of his life, have been asked many times of the research workers who have provided for us much of the information now available in the field of mental measurement. The late Edward L. Thorndike, another great figure in the history of American educational psychology, was once asked whether he thought it possible that there were potentional Ph.D.s among ditchdiggers. His reply [2] was somewhat as follows: "There are probably a few people with the mental ability of the average holder of the Ph.D. among ditchdiggers; it is doubtful that there are many individuals with the mentality of the average ditchdigger among candidates for the doctorate." The reader is invited to reflect upon this well-guarded statement, perhaps checking it informally by considering Ph.D. and ditch-digging acquaintances.

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[1] Lewis M. Terman and Melita Oden, "The Gifted Child Grows Up," in *Genetic Studies of Genius,* Vol. 3, pp. 55–57.

Psychologists, sociologists, and educators of today are interested in seeing to it that social inequities which divert potential research persons into manual laborers are eliminated. They are also prepared to receive and record whatever further evidence may be forthcoming to shed light upon the relative importance of hereditary factors and environmental conditions upon the course of child development.

Terman found that the interests of the gifted child are typically "many-sided and varied." Other investigators in this field are agreed that such is frequently the case. Nevertheless, some gifted children develop special scientific, scholarly, or artistic interests to the exclusion of plays and games and other usual childhood pursuits. In the guidance of such children, it then seems wise to try to direct them into play activities, when this can be done without creating resentment. Gifted children learn according to the same "laws of learning" which govern all of our intellectual activities. They simply learn with extraordinary rapidity and a minimum of "teaching," once their interests are aroused. They elide or telescope the "steps"; they seem to apprehend, memorize, and relate in a single operation. On the other hand, they do not relish dull routine; when they are little, they have to be persuaded, sometimes, that it is worth while to spell correctly in order to communicate effectively, else they will concentrate on their wonderful, exciting thoughts and images, leaving their readers to guess about their original, phonetic orthography (and practically undecipherable handwriting). Meanwhile, their typically amazing vocabularies run from words like "transcendentalism" to the latest comers in the dictionary, for instance, "snafu."

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[2] Edward L. Thorndike, unpublished class lecture.

Modern educators turned to a serious consideration of gifted children as tremendously valuable assets in the early 1920's. An indefatigable worker in this field was the late Leta Hollingworth, whose book *Gifted Children: Their Nature and Nurture* became an educational classic. Professor Hollingworth and others called attention to the fact that modern education at that time had concerned itself with *mentally deficient* children but had given no thought to children who were atypical, in the sense of possessing unusually high intelligence. Many of these socially valuable young people were wasting their time in regular grades, in some cases becoming overt behavior problems in addition to forming lazy habits. A few were permitted to "skip" grades, usually with very unfortunate social and emotional consequences. In the intervening years, three major approaches have been made to the problem of educating the gifted: acceleration, enrichment of the curriculum, and grouping.

Acceleration

Recent plans for accelerating children have been more thoroughly worked out than was the old rule-of-thumb system of skipping a grade now and then, thereby leaving uncomfortable gaps in the achievement of needed skills and putting the child so skipped in a group of pupils one or two or three years older than he. Plans have been made for allowing these children to accomplish three years of work in two years, or, if they actually skip, this phenomenon is permitted only under careful educational and personal guidance. These plans are obviously more desirable than letting brilliant youngsters waste their time, incidentally developing poor attitudes and work habits. Yet, no matter how carefully planned, many of the old objections remain: children are hurried out of their normal peer groups; they are looked upon as "sissies" or "brains" by their less gifted schoolmates; they sometimes become self-conscious and/or conceited as a result of being singled out; their social adjustments in college or vocation are frequently impaired by the poverty of their earlier social experience.

Curricular enrichment

A curriculum enriched through taking extra "elective" subjects, such as a modern foreign language or two during the elementary school years, experiences in the arts, a wide, well-directed reading program, is thought by many to be the most desirable plan for educating the gifted, since it is thus possible to group them for most of their work with their social and emotional peers. A modification of the plan is one whereby teachers plan "maximum" and "minimum" assignments in connection with units of study, expecting that the gifted shall complete the maximum plan in the majority of their studies. Once the gifted learn to read, and they may well learn to do so with fluency in the first grade or earlier, they can be put on their own with the classroom teacher merely supplying them with reading matter.

This can most certainly become a satisfactory plan for the gifted, this enrichment of the curriculum within the child's normal school grade, but success is assured only when guidance is imaginative and competent. The busy classroom teacher finds planning for these uncomfortably brilliant children, in addition to her other work, more than she can do in many cases. The easiest way is to assign projects requiring reading and "research"; but many of these children are only too likely to be "bookish" in the first place. Another obvious way of occupying them is to make gifted children "monitors," to let them help with clerical work by the time they are in the middle grades, to "show them off" by allowing them to entertain visitors, and to plan an important role as helpers in the school office. All these outlets, good though they may be in themselves, are in the direction of alienating the gifted child from his peers and encouraging the development of arrogance.

Grouping

Many authorities today favor the grouping of gifted children in special classes or, in rare instances, in special schools. In support of this plan, the following advantages are urged: pupils may associate with their age peers throughout their school life; the gifted do not so readily develop unpleasant conceit about their abilities, since they are constantly challenged by their intellectual peers; specially trained and selected teachers may be appointed to the task of teaching gifted children; a greatly enriched curriculum is provided for all pupils in a grade or school. Those who oppose segregation of the gifted insist that the plan does not make of the gifted child a more tolerant, unassuming person, since the gifted groups develop a dangerous group self-consciousness. In a democratic society one works not alone with one's intellectual peers but with people of all grades of mentality; even during school years it is a richer experience to work with a heterogeneous group than with a homogeneous one.

Admittedly, the organization of gifted children into segregated groups sets them apart, as a group, from their peers. It is also true that young people must learn to work with all intellectual levels in their community experiences and eventually in their jobs. The writer has heard some disconcerting announcements of the intellectually gifted, such as a ten-year-old's assertion, "*I* am an intellectually *gifted* child; *Charles* [her young brother] is just average," or the comment from an adolescent genius, "My IQ is so *fantastically* high that I certainly won't need to work hard in college."

However, it would seem that these youngsters are, in a sense, set apart by nature and that the task of the educator is not to try to mix them with their peers, as one blends butter with flour, but rather to help them develop their unique capacities in such fashion that through their unique contributions they may relate in full and wholesome fashion to the society in which they are reared. Surely faulty home discipline, rather than any reasonable school plan to give them adequate scope for their abilities, is responsible for the unlovable qualities of some gifted children. Conceit is frequently a reflection of parental conceit: "My *dear,* do you know that Sue was tested at the psychological clinic and her IQ is 190? It is an *awful* responsibility to have a *genius* as your child!" Inability to put up with slower minds, negativism toward discipline, the tendency to look upon restrictions as "stupid" or "silly" and behave accordingly may also reflect home management rather than school treatment: "Jim is so *wonderful!* He reads scientific books and articles just like a professor! Of course I never stop him; he puts his light out at *all* hours and he *never* comes to meals on time! He must be free to use that *wonderful brain* of his!"

Like all other children, the gifted child needs love and careful guidance; he needs the chance to learn up to the fullness of his rich capacity; he needs to be protected from exploitation. The home, the school, and the community are responsible for seeing that those needs are filled. It is suggested that the home has the largest measure of responsibility for love and careful personal guidance; the school's job is to give him the best possible chance to develop his intellectual capabilities. Both the home and the school must cooperate with the community to see that he is not exploited as a "child wonder." To a greater or less degree, all three agencies are involved in the education of the gifted child from infancy to adulthood, even as they share responsibility for the education of normal and handicapped children.

THE INTELLECTUALLY DEPRIVED

> In all societies there are some individuals who do not make a successful "go" of life. They fail to manage their affairs with ordinary discretion. They are incapable of economic independence at more than a marginal standard of living. They get into various social difficulties, perhaps adding delinquency to dependency. They are the social incompetents who live their lives at ineffectual levels of social, occupational, and educational activity.[3]

Dr. Edgar A. Doll, a leader in the field of educating the mentally handicapped, distinguishes four major groups of factors or conditions which make for social incompetency:

[3] Edgar A. Doll, "The Feebleminded Child," in Leonard Carmichael (ed.), *Manual of Child Psychology,* pp. 845*ff.*

1. Limited environmental opportunities, poor financial circumstances, unfavorable homes and associates, ill health, crushing personal misfortunes with consequent loss of pride or ambitions.
2. Physical infirmities such as crippling, defects of sight.
3. General and specific mental disorders.
4. A group distributed throughout all socioeconomic levels, but predominating at the lower margin, made up of those with generalized mental deficiencies. The members of this fourth group are socially subnormal because they are mentally underdeveloped, apparently from birth or shortly thereafter, as a result of limited native endowment or various other influences which arrest normal mental growth.

Modern education recognizes the needs of the mentally retarded child and well-organized efforts are in progress to provide for him a school experience which will develop social and occupational competencies at the highest level at which he is capable of functioning. In progressive school systems, when this child reaches compulsory school age, he is enrolled in a special class and taught by specially trained teachers. Better still, there is a plan now under way in New York City and elsewhere to enroll the mentally retarded in nursery and kindergarten groups *before* compulsory school age. The retarded child, like his gifted brother, learns by the same processes as does the normal or average. He is different only in learning much more slowly and in limited capacity for abstraction and the higher sort of reasoning. The slow child is no longer spoken of as a "patient," even if he is so retarded that institutionalization is the best plan for him. He is thought of as a developing individual rather than a morbid specimen, and his difficulty is described as a symptom-complex, rather than as a mere subnormality of intelligence.

Children who deviate from the normal in a minus direction by more than 25 points in IQ, that is, with an IQ of 65 or less, are seldom found in the regular classrooms of modern school systems. It is the pupil in the so-called borderline classification, 70 to 90 IQ, who frequently becomes a classroom problem. Frequently these children are segregated into special classes and sections, a procedure which is challenged by some educators for much the same reasons as those urged against segregating the gifted. The student of child development will recognize that, just as the retarded pupil learns in essentially the same way everybody else does, so, too, his physical, emotional, and social development follows a sequential pattern, and his individual characteristics make of him a unique individual. It is the responsibility of the teacher to further this development by accepting this young person and helping him meet his special needs for affection, a sense of belonging, a sense of autonomy, and all the other needs of a growing child, regardless of intellectual level.

Whether the child of lower IQ will thrive best in a group of his intellectual peers or in a heterogeneous group would seem to depend upon a number of circumstances: the degree of his present retardation; how his parents and the child himself feel about segregation; how wide a span of intelligence levels is represented in a heterogeneous group which this child might enter; and, perhaps most of all, the degree of acceptance which will be extended to him by the teacher of the heterogeneous group under consideration.

The retarded child in the modern school is accepted as a person in his own right. He shares the basic needs common to all children in addition to the special needs that are his in making his adjustment to home, school, and community demands upon his limited mental capacity. His problem is growing up in his own fashion, just as growing up is the problem of all young persons. The slow pupil easily becomes the delinquent pupil in schools which do not meet his needs; where his needs are met and his sense of personal identity and integrity are built up, he becomes a competent, respected citizen in the school community. Like all other adolescents, he will finally look forward to a job and a place in the world in which he lives, goals which the right school and the right guidance will help him achieve.

UNSTABLE CHILDREN

Unstable, or emotionally disturbed, children are receiving a great deal of attention today. Yet they still represent the least understood and most unhappy group in our juvenile population. Since stability is a matter of degree, and perfect stability impossible for the finest human organism to achieve, the classification of unstable children, according to whether their disturbance is slight and/or temporary and hence manageable in a normal classroom or home situation or whether this disturbance is deep and requires psychiatric care, is difficult. Furthermore, a mistake in classification is usually fraught with danger to the mental health of the individual. It is destructive to the child to have a passing emotional upset magnified into an imminent psychosis; it is yet more destructive to leave a seriously disturbed child to the doubtful care of people who lack psychiatric training. Early diagnosis of illness, if accurate, is greatly to the advantage of the emotionally sick child; on the other hand, people who possess that little knowledge which is a dangerous thing are sometimes prone to jump at conclusions momentarily.

Psychiatric case records show that certain types of mental illness can be observed and diagnosed in very early childhood. Erikson[4] describes one case in which "schizophrenia" appeared in a child a year old. Nursery school teachers of wide experience can testify to the occasional presence of mental illness in three- and four-year-old children. The correct evaluation of these early childhood cases requires expert observation and diagnosis. Here, again, too quick a decision may have most unfortunate results both for the child and for his parents, while, at the same time, neglect of serious symptoms may be harmful to everyone, including the other members of a nursery school group.

Jean was a little girl who was probably held too long in a group of normal five-year-olds. Jean was a beautiful child with big, wistful brown eyes and a rare but breath-taking smile. It was hard to believe the suggestion that she might not benefit by play with "normal children" under good guidance. Several month's experience with Jean proved that this charming-looking child was much too ill to profit from group experience. From the start it appeared that Jean's mother rejected her. The mother reported that the child had been "queer" from the time she was six months old; she complained bitterly of the trouble and expense Jean had caused the family because of constantly requiring medical care and, frequently, hospitalization. Jean's weapon of aggression in a world where she felt unloved and unwanted proved to be a persistent retention of feces for fantastically long periods, culminating in impaction and hospitalization.

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[4] Erik Homburger Erikson, *Childhood and Society*, pp. 169–181.

Jean was so appealing that she was accepted in the nursery school on probation. During her weeks of attendance at school, Jean never addressed another child nor responded by using any of the very well planned play equipment provided for her group. She wandered around aimlessly, turning on the gas cocks on the kitchen range and the water taps wherever she could reach them. While her illuminating smile was rarely seen, she wanted very much to come to school and cried pitifully when it was time to go home. She had one serious impaction during this school period and seemed more and more withdrawn from reality as time went on. Jean had to be dropped from the school and left in her mother's care; the advice of the school psychiatrist was not regarded, and Jean was placed in a school for mentally retarded children.

Johnny, on the other hand, seemed quite a risk to take on. He was a beautiful physical specimen, had a ready smile for everyone, and wanted to come to school. He, too, was rejected by his mother and he, too, had a powerful weapon of aggression against the world. At three and a half he had a record of never defecating in the appropriate place; he either did so in an unsuitable place or, when punished, refused to defecate at all, with resulting impactions. A physician suggested nursery school, but the mother vowed that the school (1) wouldn't take him and (2) surely wouldn't keep him, while the nursery school director was highly doubtful.

Johnny never made a mistake in school. He was "hail-fellow-well-met" and running everybody in a pleasant sociable fashion within a week, but at home there was no improvement noted, and Johnny was hospitalized twice. Johnny's home was adequately large for his mother, father, baby brother, and himself. They had a nice garden. But Johnny didn't like his home and his home couldn't accept him. A maternal aunt, who loved children and had six of her own, offered to take Johnny into her small city apartment. The offer was accepted, and Johnny at once started on a successful school career in a new community. There was one episode of protracted retention, which the aunt handled patiently and firmly. Johnny soon qualified as a normal little boy, rather unusually competent in his peer group.

Even with older children, the uncensored opinion of home and school may be quite in error. Patricia's overambitious mother insisted that she remain with a rapid advancement group because of her high IQ. The school felt the pace was too hard on Patricia but yielded to the parents' wishes. Patricia "broke down" at thirteen and spent a year in a mental hospital. Had the school authorities held their ground and provided adequate guidance for the child, this episode might have been avoided.

Emotionally sick children need just what all other children do: acceptance and affection. Their special and peculiar need is understanding, and, when their illness is serious, it is imperative that they have psychiatric care. Play therapy, in the course of which the child is invited to act out his repressed fears, hostilities, and aggressions, is an accepted technique when carried out by a qualified therapist. Many children can remain in school when they are reinforced by the acceptance and understanding which they experience in the course of therapy. However, it is strictly inadvisable for classroom teachers, no matter how well intentioned, to set themselves up as therapists. Their proper role is to accept the child undergoing therapy as completely as possible under classroom conditions and to add their affectionate concern to the work of the therapist in building up the child's ego.

Our present deep concern for emotionally disturbed children is fully justified. It remains for the community to provide adequate resources for their diagnosis, care, and treatment and for the experts to perfect their understanding of juvenile mental illness and its treatment.

CHAPTER XV

Ego Development

There was a child went forth every day,
And the first object he looked upon, that object he became,
And that object became part of him for the day or a certain part
  of the day,
Or for many years or stretching cycles of years.

WALT WHITMAN [1]

THE COURSE OF PERSONAL GROWTH

Sigmund Freud, whose pioneering work stimulated the development of modern psychiatry, conceived of the self, or the "ego," as being somewhat like an uneasy rider guiding a wild horse through a countryside filled with terror and hostility. The horse in this figure corresponds to the primitive impulses, the unconscious drives common to all human beings, which Freud called the "id." The countryside corresponds to the environment, both physical and social, in which the ego, the rider, must establish himself as a competent horseman. The implication of Freud's theory was pessimistic; the horseman couldn't really win for the cards were stacked too heavily against him. The ego was caught between the intolerable pressure of biological needs on the one hand and the heavy-handed restrictions of society, which demanded their repression or sublimation, on the other. The best the individual self could accomplish was a compromise which left him with the discomfort of unsatisfied desires in return for the doubtful social acceptance without which he could not function as a human being.

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[1] Walt Whitman, "There Was a Child Went Forth," *Leaves of Grass.*

Freud thought of the ego as comprising the conscious, striving, public self, John Smith as he appears in his life activities to his friends, his neighbors, and his enemies. But Freud also maintained that the ego was rooted and grounded in the id and that, accordingly, John Smith's motives were private and partly unconscious. A third concept, the "superego," completed Freud's theory of the structure of personality. This superego, largely unconscious, represents the prohibitions, many of them stern and cruel, in nature and thus creating both hostility and feelings of guilt experienced by the growing self in infancy and early childhood. Experiences in later life, Freud thought, might modify the conscious elements of the superego; however, they might not alter its basic structure.

"The Phenomenological Frame of Reference" [2]

Modern studies in psychiatry and sociology leave us with a less hopeless outlook than the original Freudian one. These take into account the fact that man's native equipment includes the capacity to build a self-structure which shall be enduring, a self-concept distinguished by conformity to reality. This self-structure is wrought out of experience and becomes more or less permanently fixed according to the circumstances of the person's growth and the intensity and satisfaction of his experiences.[3]

Contemporary educational psychology has adopted what is known as a "phenomenological frame of reference." That is, we are deeply concerned with the child's way of perceiving himself and the world in which he lives. When the way in which he sees himself in relation to his everyday activities conforms to reality, he may develop a design for living, a sound ground plan which guarantees the integrity of the ego. The child's naïve experiences, his everyday world of home and school and playground and adventure abroad, constitute his phenomenal field. His behavior is completely determined by this phenomenal field.

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[2] Donald Snygg and Arthur W. Combs, *Individual Behavior*, pp. 10*ff*.

[3] *Ibid.*, pp. 80*ff*.

At no point in the development of a human being can he be separated or abstracted from his phenomenal field. Some sort of field, as was implied in an earlier chapter, exists for even the unborn child. But we can only speculate what sort of field this is. After birth, James's description of the neonate's world as a "buzzing blooming confusion" is still accepted as being as good as any other. Gradually, the infant begins to differentiate, to distinguish objects, to see himself as distinguished from his environment. With differentiation his education begins, and, obviously, his earliest differentiations are made with reference to his physical environment. These physical experiences are basic; they furnish a sort of springboard for the social experiences which the culture provides.

It is pertinent at this point to remind the student of child development of the perennial question as to which is more important, heredity or environment. (This is flippantly taken to be analogous to the query, "Which comes first, the chicken or the egg?") One way of looking at this partially unsolvable problem is to consider the experiences of the infant in the physical world and observe that his perceptions of this world are conditioned by the soundness of his organism. This soundness is a matter of inheritance, although it is influenced by congenital factors and by the experience of birth. On the other hand, these perceptions of physical reality are less important in the development of *self*-perception than social and cultural factors: "As a matter of fact, the culture into which the individual is born is a far more potent factor in the development of the phenomenal self [the self-perceived self] than the child's reactions to his physical surroundings."[4]

THE SELF-CONCEPT IN EARLY CHILDHOOD

Even in very early childhood, social approval and/or its reverse are at work in determining the values which the individual internalizes, that is, makes a part of his picture of himself in his world. He soon begins to feel guilt in connection with failure to bring his natural behavior into conformity with his parents' wishes. To be secure and happy, he must see himself as a *good* boy; in our culture, good boys eat their meals with growing tidiness and efficiency, refrain from wetting or soiling after a certain age, restrain the murderous fury of their hostility toward siblings and other rivals, show their parents appropriate affection and submission. Failure in any of these performances arouses destructive guilt feelings in the young child and, finally, hostility toward the people who make him feel guilty. His behavior, as every teacher of young children knows, reflects his feelings. In general, "It is the unceasing attempt of the individual to achieve need satisfaction when confronted with the demands imposed upon him by external reality that produces the behavior we observe." [5]

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[4] *Ibid.*, p. 82.

It is, perhaps, in order to repeat at this point some of the observations which were at least implied in earlier chapters. Parents all too easily judge a preschool child's behavior in terms of the adult's phenomenal field rather than the child's. Stool smearing, finger feeding, spitting, masturbation, and other babyish activities are viewed in the light of the adult's sense of values, wrought in the adult's process of growing up, and often colored by the adult's childhood experiences of overtraining with respect to cleanliness. They are not regarded in the light of the small child's frame of reference. Resulting rejection and/or punishment reinforce the child's feelings of insecurity. Once the feeling of rejection is established, then even the mildest rebuke serves to intensify it and delineate more firmly the child's picture of himself as an unsuccessful and, hence, rejected person. He can be relied upon to behave in accordance with this self-image. Now, no parent can be expected to achieve a batting average of 1.000 in understanding and dealing constructively with little children's behavior; it is probably true that at least momentarily every child is "rejected" by his mother or father. This being the case, it becomes important to be constantly vigilant and imaginative in building the positive sense of security and success which makes for trust and the strength to withstand momentary misunderstanding and rejection.

SCHOOL EXPERIENCE AND THE CONCEPT OF THE SELF

The child who enters school with a picture of himself as a secure, successful, well-loved person and whose hostilities and guilt feelings are, consequently, at a minimum is ready to make use of the new opportunities for growth and self-development provided by the school and to clarify the details in a generally favorable self-concept. He is ready to evaluate himself in an elementary fashion and the power to do this will increase as the years go on if the school environment is a favorable one. However, he will still need the reinforcement of the closer, more intimate ties to an accepting family.

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[5] *Ibid.*, p. 89.

On the other hand, if the five- or six-year-old has formed a concept of himself as unsuccessful and/or rejected, it is not easy to change this concept. The older he grows, the more difficult the change becomes. This is due, in the main, to two reasons:

1. Inertia—a psychological organization or integration once established tends to resist disruption. You and I and our children defend our several self-concepts to the last ditch. Even apparent changes in our typical behavior are, in reality, artifacts of our frames of reference. As an overbearing, bullying teacher, I may be conciliating and submissive toward my supervisor. Both are due to my picture of myself with respect to authority; I see myself as having authority over my pupils, dominion in my classroom. But the supervisor is *my* superior, and, in his case, my relating of myself toward authority results in submissive behavior.

2. A second factor which reinforces inertia in making it difficult to revise a self-concept is the fact that this concept colors any individual's subsequent perceptions. You take from a lecture, a book, a sermon, or a play that which confirms your self-concept. I do the same. Therefore, it is difficult, figuratively speaking, to make a dent in either of us. In the same fashion, a child who sees himself as a successful, well-loved person can take censure and reasonable punishment in his stride, while a child who feels rejected takes the mildest rebuke as further evidence of rejection.

THE ROLE OF THE SELF-CONCEPT IN BEHAVIOR

In the healthy personality, the growing self-structure or self-concept conforms to the realities of the individual's life situation. On the other hand, the disturbed child tends to build a concept which is more or less at variance with these realities. Parents, teachers, and peers are at hand to help children test reality, to match up, as it were, the self-concept with the way in which the self is actually functioning in the world of people and events. Healthy children perform much of the task for themselves in the course of varied role-playing and role-testing in their homes, schools, and communities. Sick children require the guidance of a psychiatrist or a trained therapist working under a psychiatrist's supervision in correcting their self-images to conform to the realities of the world in which they are living.

Probably all children need help at one time or another, first, because no young life is lived without some frustrations and shocks which are threats to the self-structure and, second, because the childhood concept of the self and the values internalized in the earlier stages of emotional growth, which correspond roughly to the Freudian superego, need to be integrated with the ever-widening range of new experiences. The nursery child, in the course of his experiences with people and things, internalizes the values inherent in his family's way of living and especially of reacting to him. When this child goes to school, the way things are done in the classroom and on the playground introduces new, different values, which he must interpret for himself and relate to his earlier self-structure. At every social crisis encountered, the growing person must accomplish such reintegration: when he goes to college, when he takes a job, when he has his first date, when he marries. At no stage is the task an easy one, and other people may do much to make it harder or easier, as the case may be.

Prescott Lecky,[6] who used the term "self-consistency" to describe the tendency of each of us to behave in a fashion characteristic of our several unique personalities, interested himself, among other things, in the way the self-image affects the child's progress in learning school subjects. According to Lecky's theory, "the mind is a unit, an organized system of ideas. All of the ideas which belong to the system must seem to be consistent with one another. The center or nucleus of the mind is the individual's idea or conception of himself." [7]

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[6] Prescott Lecky, *Self-consistency*.

[7] *Ibid.*, p. 246.

Accordingly, ideas consistent with the system are readily adopted and assimilated, while ideas which are inconsistent are rejected with corresponding vigor. John, otherwise competent and seemingly well adjusted, reaches junior high school without attaining a reading ability higher than that expected of a third-grade child. Tutoring seems to be of no avail. John knows that his other subjects suffer because of his poor reading ability, he is distressed by his school record, and, yet, it seems that he *cannot* learn to read. John has an IQ much above the average, his vision is excellent; the remedial reading teacher is at a loss to account for his very slow progress in spite of persistent effort. Lecky and others have found that pupils such as John, resistant to "expert" teaching, may learn to read or learn a foreign language or grasp college algebra *not* through high-pressure tutoring but through therapy directed toward correcting a distorted self-image. Starting with this hypothesis, John's concept of himself, which is "the center or nucleus" of his mind, includes failure to read as one item. Therefore, successful reading is difficult or impossible, since John actively resists all efforts directed toward helping him improve his reading skill, because his mind vigorously rejects any threat to its very center, the self-image. John, and many other students like him, have been found to improve their academic records radically in response to therapy directed not toward improving skill but rather toward helping to solve personal problems.

THE PROBLEM OF COMMUNICATING FEELINGS

By definition, the self-concept is admissible to consciousness: "The self-concept or self-structure may be thought of as an organized configuration of perceptions of the self which are admissible to awareness." [8] Yet, it cannot be fully communicated to another, since it is highly charged with feeling, and our feelings constitute for each one of us a largely private world. My internal changes upon viewing a magnificent sunset or the skyline of a mighty city are felt only by me; the same holds for the feelings of a little child when he is given a fascinating toy by a loving parent. However, the sharing of feelings, so far as they may be shared, is a fundamental human need; hence, the joy of creative work and the frustration accompanying a life of dull routine.

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[8] Carl Rogers, *Client-centered Therapy: Its Current Practice, Implications, and Theory*, p. 286.

Play therapy is directed toward providing the child with playthings which stimulate him to dramatic play in an *unstructured* situation for which he can create his own pattern or structure. In such a situation, it is possible for the child to communicate as fully as possible his feelings and tensions; the therapist, always permissive and in many cases nondirecting, gives the child support in the form of complete acceptance within certain wide but firm limitations. For instance, the child may give vent to his repressed hostilities through obscenity, but he may not make an attack upon the person of the therapist, nor may he injure himself.

It is the recognition of the need for self-expression that prompts the modern school to provide abundant material for, and incentive to, creative work. Parents who follow contemporary thinking about children's needs provide these in the home so far as practicable. The healthy child is not "mixed up"; he accepts his feelings and finds joy in expressing them. Therefore he profits greatly through the use of expressive media. On the other hand, the sick child is mixed up; he needs to communicate feelings of which he is fearful and to experience acceptance of his communication. The happy child in the home or the classroom delights in working in the midst of his family or classmates; he needs no therapy and only occasional reassurance. The sick child needs the support of a trained therapist.

Personal Maturity

On the path toward maturity, or ego integrity, the first goal is trust in the environment; the final goal is trust in the self, a maturity of personality in which the meaning of life and the significance of the individual's particular role in his own culture make for affirmation, fearlessness, and love of life. In contrast to these stand the denial, fearfulness, and self-destructive attitudes, the "egotism" in the popular meaning of the term, which are characteristic of people who fail to grow up or achieve ego integrity.

Erik Erikson has said that "healthy children will not fear life if their parents are mature enough not to fear death." Present-day efforts in those scientific fields which are most intimately concerned with human development are directed toward helping the young generation on toward the goal of ego integrity, to the end that ensuing generations may number fewer frightened children.

Suggested Activities

CHAPTER I. TOWARD UNDERSTANDING CHILDREN

Audio-visual

View the film *Preface to a Life.*[1] Three possible courses of development are suggested for the newborn Michael Thompson, whose life is the subject of this film, depending upon whether his father's ambitions for him or his mother's aspirations or his own needs and potentialities are permitted to dominate his nurture and education. Assign some members of your group to pay especial heed to the goals of Michael's mother and to how these goals affect her attitudes toward her son. Assign others to study the behavior of Michael's father with the same end in view. Assign still another group to concentrate especially upon the needs of small Michael, noting when and how these conflict with his parents' wishes for him.

Discussion

1. How would Michael probably have impressed his fifth-grade teacher if he were to have been dominated by his mother's wishes? How would he have related to his classmates? What unsatisfied needs would affect his school behavior?
2. How would he probably function as a fifth-grade pupil if his father's goals had been the chief influences in his earlier education?
3. Discuss what role Michael might play in a fifth-grade group had he been allowed to develop in accordance with his own needs and abilities.
4. What did the expected arrival of another child mean to Michael's mother? To his father?
5. What did the possibility of a brother or sister in the family mean to Michael, regardless of his upbringing until that point?

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[1] Film described on page 281.

6. Evaluate Mrs. Thompson's attitude toward Michael in connection with the baby's coming. How did it compare with her husband's?

7. Formulate a set of suggestions for dealing with the prospect of a new arrival in the family in the guidance of a young child.

8. Are you now acquainted with any youngster who seems to you to need special help in meeting his emotional problems? Describe the situation briefly, if so.

9. Do you recall any incidents in your own growing up which were disturbing to you at the time and which might have been avoided or even turned to good account in your development with sympathetic guidance?

10. Select and prepare for discussion one of the sketches of child development appearing in the pages listed below from the volume *These Are Your Children.*

Further Reading

ANDERSON, JOHN E.: "Methods of Child Psychology," in Leonard Carmichael (ed.), *Manual of Child Psychology*, John Wiley & Sons, Inc., New York, 1946. A scholarly critical summary of progress in the science of child psychology.

BÜHLER, CHARLOTTE, FAITH SMITH, and SYBIL RICHARDSON: *Childhood Problems and the Teacher*, Henry Holt and Company, Inc., New York, 1952, Part I, Chap. I–IV, and the Prologue to Part II. This will be interesting, easy-to-read, supplementary material.

DAVIS, ALLISON, and ROBERT HAVIGHURST: *Father of the Man*, Houghton Mifflin Company, Boston, 1947, Chaps. I–III.

JENKINS, GLADYS, HELEN SHACTER, and WILLIAM MAUER: *These Are Your Children*, Scott, Foresman & Company, Chicago, 1949, pp. 55–61, 73–79, 88–93. These pages provide stimulating anecdotes of child behavior.

CHAPTER II. THE BEGINNING OF LIFE

Direct Experience

Try to spend some time observing a young infant, either in his own home or in a maternity ward nursery. Study the baby's appearance and behavior, noting your observations in your own words and relating these to the text whenever possible.

Audio-visual

View the film *Heredity and Prenatal Environment.*[1] Note the facts presented. Then view the film-strip which is intended as a review of the film. Check your own notes.

Discussion

1. Account for the appearance of a newborn baby, in terms of its earlier life in the uterus.
2. Draw up a set of suggestions for the physical and mental well-being of an expectant mother, justifying each.
3. Explain why the experience of normal birth may be called "traumatic."
4. Discuss the advantages to mother and child of natural childbirth. How does this method of delivery alter the usual role of the father in this crisis?
5. What are some of the limitations of natural delivery, in comparison with usual procedure, in exceptional cases?
6. What is meant by rooming-in in the case of the neonate? Discuss why this procedure is now thought to be desirable and give your own reaction to the idea that newborn babies may be affected by their "social" environment.
7. Discuss the disadvantages of rooming-in.
8. List the needs of the newborn baby and discuss breast versus bottle feeding as a means of meeting these needs.
9. What reactions, if any, have you heard of among your friends toward nursing their own babies?
10. Basing your responses on what you have gathered from the film *Heredity and Prenatal Development,* how may the ability to play the violin or dance beautifully be influenced by hereditary factors?

Further Reading

Davis, Carl Henry, and Donita Ferguson: *Childbirth: Your Questions Answered,* Harper & Brothers, New York, 1949. Simple, nontechnical discussion.

Gesell, Arnold, and Frances Ilg: *Infant and Child in the Culture of Today,* Harper & Brothers, New York, 1943, pp. 73–75, 80–87. A simple statement by an authority concerning the first days of postnatal life.

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[1] Film described on page 281.

RIBBLE, MARGARET: *The Rights of Infants,* Columbia University Press, New York, 1943, especially Introduction and Chaps. I–III.

THOMS, HERBERT, LAWRENCE G. ROTH, and DAVID LINTON: *Understanding Natural Childbirth,* McGraw-Hill Book Company, Inc., New York, 1950. Excellent illustrations by David Linton.

CHAPTER III. INFANCY

Direct Experience

Spend a minimum of an hour weekly observing a very little child, repeating your observations at intervals as frequently as the time allotted to your course in child development permits. Note the development achieved by this child in motor, prehensile, language, and general social behavior; if repeated observations can be made, note indications of growth as the weeks go by. Compare the records you make with the records given in *Infant and Child in the Culture of Today.* Note whether "your" child, at, for example, twenty-eight weeks, conforms rather closely to the Gesell schedule or approximates more nearly that of a slightly older or slightly younger child. Consult Gesell and Ilg's book freely as you record the behavior of the child you are studying, keeping in mind that you are gathering interesting facts rather than making comparisons with the "typical" schedule. With the help of the child's mother, chart his usual "behavior day."

Audio-visual

View the film *Life with Baby.*[1]

Discussion

1. From your own experiences with babies and from your film viewing, evaluate some of the currently popular playthings for the very young. Mention some which are good and decide why; note some which serve no purpose beyond being "presents" for thoughtless adults to purchase in haste and bring to "the baby."
2. What do you believe to be the indications that a child is ready for a Taylor Tot? Explain your reasons fully.
3. With what considerations in mind should babies' clothing be selected?
4. How should a parent or a baby-sitter deal with a baby under two

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[1] Film described on page 281.

who is "slow" about toilet training? How, if at all, has your own attitude toward this matter changed since you have begun to study children?

5. How important is mealtime to an eighteen-month-old baby? How do you think feedings should be managed, and why? Do you think it is necessary to make an event out of a meal?

6. What are some of the indications that a baby is developing "trust" in his environment?

7. How may the adults in the family help the young child develop a feeling of autonomy?

8. Draw up some suggestions for helping baby through the teething period.

9. What are the everyday situations which may frighten a child under two?

10. Should the baby see very much of people outside of his parents and siblings? How may the baby's needs in this respect be explained to grandparents, uncles, and "in-laws"?

Further Reading

BRIDGES, K. M. BANHAM: A genetic theory of the emotions, *J. Genet. Psychol.*, Vol. 37, 1937, pp. 514–527.

GESELL, ARNOLD, and FRANCES ILG: *Infant and Child in the Culture of Today*, Harper & Brothers, New York, 1943, pp. 92–158.

RIBBLE, MARGARET: *The Rights of Infants*, Columbia University Press, New York, 1943, pp. 72–92.

SHERMAN, MANDEL: The differentiation of emotional responses in infants, *J. Comp. Psychol.*, Vol. 7, 1927, pp. 335–351, 385–395. This and the Bridges reference present clear accounts of research in the field of early emotional development.

CHAPTER IV. EARLY CHILDHOOD

Direct Experience

Observe the play activities of two-year-old children in a park, on a playground, or in a nursery school. Note how they relate to one another and describe their relating, giving definite instances. In the same fashion, observe groups of three-, four-, and five-year-old children.

Audio-visual

The aim of this chapter is to familiarize students with the typical behavior of preschool children. There are several excellent films which may be used in achieving this purpose, specifically *The Terrible Twos and the Trusting Threes, The Frustrating Fours and the Fascinating Fives, It's a Small World,* and *A Day in the Life of a Five-year-old.*[1] As a climax to the work in connection with this chapter, direct experiences, film viewing, and additional reading, the film *Life Begins*[2] seems appropriate. Two films just listed, *The Terrible Twos and the Trusting Threes* and *The Frustrating Fours and the Fascinating Fives,*[3] are consecutive and present a most interesting and entertaining account of the social development of one group of children.

Discussion

1. Should two-year-olds go to nursery school?
2. What do three-year-olds like to play with?
3. Shall we try to teach young children manners? If so, how?
4. Should two- and three-year-olds be required to play in one certain area of the house or apartment in which they live (for instance, *not* in the living room), or does the imposition of limits jeopardize their feeling of being loved and wanted?
5. In what way is a child's reaction to scolding or to punishment related to his basic sense of security and trust?
6. What experience have you had with sibling rivalry? Do you agree that this rivalry is universal?
7. In the family constellation, what advantages does the oldest child enjoy? The middle child (or children)? Respectively, what are the handicaps of each position?
8. How may the other members of the family best help the preschool child's language development?
9. How do you think older brothers and sisters and adults in the home should respond to such behavior as biting, spitting, and obscene language on the part of the nursery child?

Further Reading

GESELL, ARNOLD, and FRANCES ILG: *Infant and Child in the Culture of Today,* Harper & Brothers, New York, 1943, pp. 159–173, 177–190, 202–211, 224–234, 246–251.

MIDCENTURY WHITE HOUSE CONFERENCE ON CHILDREN AND YOUTH: *A Healthy Personality for Every Child,* Washington, D.C., 1951, pp. 77–84.

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[1] Films described on page 282.

[2] Film described on page 281.

[3] Films described on page 281.

Woodcock, Louise P.: *Life and Ways of the Two Year Old*, E. P. Dutton & Co., Inc., New York, 1947, Chaps. I–IV.

Chapter V. Growth Levels at School Entrance

Direct Experience

Spend a morning in a kindergarten or young first-grade class. Comment on the behavior of the children in your own words, covering their interpersonal relations among themselves and with the teacher, their characteristic attitude toward work, their behavior at play, both supervised and unsupervised.

Audio-visual

View the film *Children Learning by Experience.*[1] In your notes, summarize the several different sorts of learning experiences the film portrays.

Discussion

1. Recall, if possible, your own first day at school. Notice whether the facts you remember are associated with pleasant feelings or the reverse. Discuss the things about the very first day at school which make this day important and memorable.

2. Describe the physical appearances of a five-and-a-half- or six-year-old child known to you.

3. Record a six-year-old's conversation, either with you or with one of his peers.

4. Discuss what children "learn" through apparently random experiences with the environment: for instance, in the film *Children Learning by Experience*, the little girl poking her foot in and out of the dry sand or the baby trying to put a pebble into the neck of a bottle.

5. How does an environment such as a nursery school or kindergarten room stocked with well-chosen play equipment compare with the out-of-doors as a setting for learning?

6. In the film *Children Learning by Experience*, recall the little girl playing on the floor with her mother (or her teacher). Did the adult in any way precipitate the child's exhibition of frustration and annoyance?

7. What do school-age children learn in the course of unsupervised

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[1] Film described on page 282.

dramatic play in which they impersonate cowboys or gangsters or mounted police? Does this learning differ from what goes on when a competent adult is coaching them for a play or other planned performance? If so, how?

8. What are the advantages of a well-planned, adult-directed learning experience over one which arises spontaneously through the interest of the learner? Has the spontaneous situation compensating advantages over the planned and directed one?

9. What would you consider to be the personal qualities essential to the good teacher of young school entrants?

10. How does the assessment of "six-year-oldness" offered by Gesell and Ilg in the reference listed below compare with your own experience or your observation of children of this age?

Further Reading

BÜHLER, CHARLOTTE, FAITH SMITH, and SYBIL RICHARDSON: *Childhood Problems and the Teacher*, Henry Holt and Company, Inc., New York, 1952, Chap. V.

GESELL, ARNOLD, and FRANCES ILG: *The Child from Five to Ten*, Harper & Brothers, New York, 1946, pp. 60–130.

MIDCENTURY WHITE HOUSE CONFERENCE ON CHILDREN AND YOUTH: *A Healthy Personality for Every Child*, Washington, D.C., 1951, pp. 97–122.

CHAPTER VI. THE PHYSICAL GROWTH OF CHILDREN

Direct Experience

1. Take height and weight measures for three or more children of the same chronological age but of different body builds. Study the Wetzel grid in terms of these measurements.

2. Study the food habits, *i.e.*, appetite, food preferences, typical day's intake, of two or more of these children.

3. Visit a class organized for physically handicapped children; note their interpersonal relations with their peers and with their teachers.

Discussion

1. Relate incidents known to you of children who are socially handicapped by, or who are developing unfortunate compensations for, being overweight or undersized.

2. Do you know of any instance, such as the one given in this chapter,

in which physical status was helpful in furthering the adjustment of a child who was either retarded or accelerated in school?

3. In your experience and/or observation, what are the particular problems of the child who is the biggest one in the class? The smallest? What can adults do to help these difficulties?

4. Were you ever considered a "feeding problem"? Do you know any children who are now causing their parents anxiety by refusing to eat? What are some of the reactions parents give to such problems? Discuss what are appropriate reactions.

5. Do you know of any individual in whose case overeating or self-starvation seems to be related to a general personality problem?

6. In your experience, how do other children react to a child of primary school age who needs to wear thick glasses? A hearing aid? A child who uses crutches? A spastic?

Further Reading

Breckenridge, Marion, and E. Lee Vincent: *Child Development*, W. B. Saunders Company, Philadelphia, 1943, Chaps. VII–VIII.

English, Horace B.: *Child Psychology*, Henry Holt and Company, Inc., New York, 1951.

Chapter VII. Intelligence

Direct Experience

Arrange to observe a qualified person administer the Terman-Merrill intelligence test to a primary school child. Study the record booklet carefully in advance. Note answers and other reactions made by the child which especially interest you.

Discussion

1. Using the rating scale on the cover sheet of the record booklet, discuss the reactions of the test subject and fill in the ratings which you agree are appropriate.

2. Discuss the various test items separately, recalling the child's responses. In terms of Binet's definition given at the head of this chapter, evaluate the test items as being indicative of "intelligence."

3. Arrive at a definition of intelligence which satisfies you.

4. Study the Merrill-Palmer and/or the Minnesota test for preschool children. Discuss these tests in relation to your definition of intelligence.

5. Summarize and evaluate the argument of Wechsler's article, "Cognitive, conative, and non-intellective intelligence."

Further Reading

DAVIS, ALLISON, and ROBERT HAVIGHURST: *Father of the Man,* Houghton Mifflin Company, Boston, 1947, Chap. VI.

ENGLISH, HORACE B.: *Child Psychology,* Henry Holt and Company, Inc., New York, 1951, Part VI.

TERMAN, LOUIS, and MABEL MERRILL: *Measuring Intelligence,* Houghton Mifflin Company, Boston, 1937, Part I.

WECHSLER, DAVID: Cognitive, conative, and non-intellective intelligence, *Amer. Psychologist,* Vol. 5, 1950, pp. 78–83.

CHAPTER VIII. THINKING AND COMMUNICATION

Direct Experience

Record one or more conversations between two or more children of school age. Study your records and analyze them from the point of view of vocabulary, grammatical construction, cogency of reasoning, clarity of concepts.

Discussion

1. Discuss Piaget's statement that "logical thinking is an argument we have with ourselves."

2. Discuss Sargent's statement to the effect that the "form or processes of thinking, as well as its content, are greatly influenced by language."

3. Describe an incident in the last few days in which you have engaged in successful problem solving. Recall another instance in which you have not solved the problem and indicate where your reasoning failed.

4. Review the steps in Dewey's *How We Think.* How far can we help one another's thinking at each step?

5. State the assumptions on which Hughes Mearns's experiment was based.

6. Do the results of the experiment which you have read justify these assumptions?

7. What are the essentials of an accurate report?

8. What facts about children's thinking and feeling account for inaccuracies in their reporting?

9. From your reading and observation, what are the arguments for and against teaching a young child a foreign language?

10. Draw up a list of suggestions for improving your own habits of thinking.

Further Reading

Dewey, John: *How We Think,* D. C. Heath and Company, Boston, 1910, Chap. VI.

Mearns, Hughes: *Creative Youth,* Doubleday, Page and Company, Garden City, N.Y., 1926, introductory chapters and browsing.

Piaget, Jean, *et al.: Judgment and Reasoning of the Child,* trans. by Marjorie Warden, Paul, Trench, Trubner & Co., Ltd., London, 1928.

Chapter IX. Trends in Emotional and Social Behavior

Direct Experience

Observe children in a first-grade room or the same children during unsupervised play. How far does competition enter into enjoyment? What form does the competition take? How do individuals react to losing? As you see them, what are the special qualities of the children who lead the group? Observe a group of fifth- or sixth-grade pupils with the same questions in mind.

Audio-visual

View the films *Emotional Development* and *Social Development,* McGraw-Hill. Also, if possible, the British film *Children Growing Up with Other People.* Note how these filmed situations compare with what you have yourself observed.

Discussion

1. Make your own inventory of the needs of six-year-old children and discuss how this inventory is changed or modified in the case of eleven-year-olds.

2. Discuss the use of competition as an incentive in the classroom. How did you yourself respond to this incentive as a child? How do you react to it now? Do you consider it unrealistic to minimize competition among children since they are living in a highly competitive society?

3. We are told that in order to love others we must first love ourselves. Explain just what is meant by loving oneself.

4. How does a child grow to love himself? Can he do so without the help of others? Explain your answer.

5. What have the amenities to do with the child's learning to love himself?

6. Discuss the role played by rules and regulations in the development of the ego.

7. Why should value judgments be avoided in writing up a record of a child's behavior?

8. What sorts of experience and what adult-child relationships do you think account for the development of a character like "Dennis the Menace"?

9. How may a teacher go about helping a child develop initiative in a case in which the child's parents are very dominating?

10. What may a teacher learn from making a sociogram representing her third-grade pupils? What are some of the limitations of this technique?

Further Reading

Bühler, Charlotte, Faith Smith, and Sybil Richardson: *Childhood Problems and the Teacher*, Henry Holt and Company, Inc., New York, 1952, Chap. VII. A discussion of social development.

English, Horace B.: *Child Psychology*, Henry Holt and Company, Inc., New York, 1951, Part VII.

Jenkins, Gladys, Helen Shacter, and William Mauer: *These Are Your Children*, Scott, Foresman & Company, Chicago, 1949, Chaps. IX–X. A summary of suggestions for ways of guiding child growth.

Raths, Louis: Instrument for identifying some needs of children, *Educ. Res. Bull., Ohio St. Univ.*, Vol. 24, January, 1947, pp. 169–177.

Raths, Louis: Teacher training and emotional needs, *J. Educ. Sociol.*, Vol. 26, March, 1951, pp. 369–380.

Thompson, George G., *Child Psychology*, Houghton Mifflin Company, Boston, 1952, Chaps. VIII, XI. These chapters summarize the results of a great deal of work on the subject of emotional and social growth, respectively.

CHAPTER X. SOCIAL BACKGROUNDS OF AMERICAN SCHOOL CHILDREN

Audio-visual

As a climax to your work in connection with this chapter, view the film *The High Wall,*[1] which examines the prejudices existing in an American community and the effects of these upon the community's youth. The characters, actually, are adolescents, and this film will be recalled in your study of pubescent changes.

Discussion

1. How do middle-class attitudes toward children affect the course of preschool experience?
2. Compare the babyhood training of the Washington children[2] with that of middle-class babies.
3. Can any decision be reached as to which is the better, the training of the little Washingtons or that of middle-class children? If so, on what basis? If not, why not?
4. Claudia Lewis[3] suggests some reasons for the fact that "mountain" nursery school children seemed less disturbed about being away from their homes than did the children in Greenwich Village. Do you accept these reasons? Do you think they are applicable only to Greenwich Village families or that they probably operate in most city families?
5. In what important or noticeable ways does Raymond's[4] behavior reflect the values prevailing in his home and community?
6. How would Raymond's day compare with that of Jimmy B., also eight years old, who lives in an overcrowded tenement in a big Eastern city and attends the neighboring public school, which is running on two shifts?
7. How would Raymond's chances of growing up free from racial and religious prejudice compare with Jimmy's? Why? What prejudices might Raymond develop?
8. Have you noted any instances in which school children showed traces of snobbishness? Of economic class consciousness?
9. List the services to children offered by your community.

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[1] Film described on page 282.

[2] Allison Davis and Robert Havighurst, *Father of the Man.*

[3] Claudia Lewis, *Children of the Cumberland.*

[4] Roger G. Barker and Herbert F. Wright, *One Boy's Day.*

10. What changes in attitude or extension of community services do you think are required at this time in the interest of the community's children?

Further Reading

BARKER, ROGER G., and HERBERT F. WRIGHT: *One Boy's Day*, Harper & Brothers, New York, 1951. Read the first 36 pages and samples from the remainder of the book according to your interest.

DAVIS, ALLISON, and ROBERT HAVIGHURST: *Father of the Man*, Houghton Mifflin Company, Boston, 1947. Complete the reading of this book.

LEWIS, CLAUDIA: *Children of the Cumberland*, Columbia University Press, New York, 1942. Read this fascinating account of education in a mountain community by a teacher who had studied and practiced education in Greenwich Village, New York.

CHAPTER XI. THE LEARNING PROCESS

Direct Experience

1. Learn twenty-five new words in a foreign language.
2. Work out a problem, such as finding ten or more words of four or more letters in a word like "ingratitude," in fifteen minutes.
3. Complete a picture puzzle. Repeat the exercise five times and time yourself each repetition.
4. Memorize a sonnet.

Discussion

1. Discuss your methods of attacking the learning problems listed above. So far as possible, explain *how* you learned.
2. What seems to be the most effective way of attacking each of these learning tasks? How does the method which gives the best results differ with the task?
3. Draw up a list of suggestions for attacking each of the four problems.
4. Does incentive seem to be important in learning?
5. What are wholesome incentives? How should a teacher of ten- or eleven-year-olds provide incentives to learning?

Note: It is suggested that Direct Experiences 1 and 2 be taken as an assignment, to be followed by discussion, as indicated. Experiences 3 and 4 would then be a second assignment, followed by discussion, in the light of which conclusions reached on the first assignment might be modified.

Further Reading

GATES, ARTHUR I.: *The Improvement of Reading*, The Macmillan Company, New York, 1947, Chap. XI.

HILDRETH, GERTRUDE: "Dynamic Learning Principles in Childhood," in *John Dewey Society Yearbook*, Harper & Brothers, New York, 1953.

HILDRETH, GERTRUDE: *Learning the Three R's*, Minneapolis-Nashville Educational Publishers, Inc., Minneapolis, Minn., 1936, Chaps. II, VII.

CHAPTER XII. LEARNING THROUGH THE SCHOOL CURRICULUM

Audio-visual

View the films *The Wilson Dam School* and *Learning through Cooperative Planning*.[1] Note striking instances of learning and, especially, the effect of interpersonal relations with the peer group upon learning.

Discussion

1. Have you, in any of your observations, seen class activities resembling those shown in these films?
2. How would you describe the role of a teacher in the Wilson Dam school?
3. What are the advantages of cooperative planning?
4. Can young children take effective part in planning their own activities?
5. How are individual differences allowed for in the teaching situations at the Hessian Hills school?
6. What is the relation between the school and the community in each school?
7. How are the children being educated with respect to taking part in community activities, as adolescents and future adults?
8. Are they being adequately prepared for college?
9. What would be the advantages of teaching in a school, such as either of these, from the point of view of interesting work and professional growth? Do you see any disadvantages?
10. Would you like to place a child in whom you were interested in a school such as either of these?

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[1] Films described on page 282.

Further Reading

Cantor, Nathaniel: *The Dynamics of Learning,* Foster and Stewart, Buffalo, N.Y., 1946.

Kelley, Earl C.: *Education for What Is Real,* Harper & Brothers, New York, 1947.

Search the files of *Progressive Education* magazine for 1927–1935 for interesting accounts of progressive school activities.

Chapter XIII. Pubescent Changes

Direct Experience

Talk with some younger people of your acquaintance, either informally or by arranging for "interviews." Encourage them to talk about their reactions to school, their activities at home, their vocational plans, their views about movies, plays, television programs, their ideas about social behavior among boys and girls, their preferred social activities.

Audio-visual

View the film *Farewell to Childhood.*[1] Recall the showing of *The High Wall.*[2] Does the behavior of the characters in the former film seem to you typical of some of your own experiences in growing up? Does this behavior make sense in the light of your experiences with younger people?

The High Wall shows how a group of adolescents reacted to an intolerable social situation. In what ways was the action in the film typical of adolescent, rather than child or adult, behavior under similar circumstances?

Discussion

1. Review the physiological reasons which account for some of the much-publicized "adolescent turmoil."

2. In view of the physical characteristics of adolescents, are the present high school curriculum and its extracurricular offerings adequate, or can you think of possible modifications which might help matters?

3. What are some of the currently prevailing social attitudes toward youth which affect adolescent behavior?

[1] Film described on page 283.

[2] Film described on page 282.

4. Are there social cleavages in the high school which affect the behavior and attitudes of students?

5. Should there be more definite vocational guidance than is now provided for younger adolescents?

6. What are the attitudes toward social behavior with people of the opposite sex prevailing among adolescents today?

7. Would many adolescents welcome the opportunity to clarify their thinking through frank discussion of their problems? If so, are adult discussion leaders indicated, or can a group of wholesome adolescents carry on alone?

8. How competent were the adults in the film *Farewell to Childhood?* Is the young heroine unreasonable in her wishes?

9. Suggest another ending for *The High Wall.*

10. Discuss the statement, "Adolescence is a 'last chance' for achieving good personal adjustment."

Further Reading

HOLLINGSHEAD, A. B.: *Elmtown's Youth,* John Wiley & Sons, Inc., New York, 1949. This is a very interesting, if somewhat discouraging, study of conditions among high school pupils in a Middle Western community. Read the first 60 pages, or so, and then browse according to your interest. You will probably finish the book.

HURLOCK, ELIZABETH B.: *Adolescent Development,* McGraw-Hill Book Company, Inc., New York, 1949. This is a classic reference on the subject and should be used as a reference in all sections of this chapter.

MALM, MARGUERITE, and OLIN G. JAMISON: *Adolescence,* McGraw-Hill Book Company, Inc., New York, 1952. A direct, sympathetic treatment of the subject, easy to read because very well written and giving a wealth of illustrative anecdotes. Especially recommended are Part I and Chaps. IV–VIII, Part II, but many students will want to read the whole book.

CHAPTER XIV. EXCEPTIONAL CHILDREN

THE INTELLECTUALLY GIFTED

Further Reading

HILDRETH, GERTRUDE, and FLORENCE BRUMBAUGH: *Educating Intellectually Gifted Children at Hunter College,* Harper & Brothers, New York, 1952, especially Part I.

HOLLINGWORTH, LETA: *Gifted Children: Their Nature and Nurture,* The Macmillan Company, New York, 1926. A classic in the field which will repay reading twenty-eight years after its publication.

THE INTELLECTUALLY DEPRIVED

Further Reading

DOLL, EDGAR A.: "The Feebleminded Child," in Leonard Carmichael (ed.), *Manual of Child Psychology*, John Wiley & Sons, Inc., New York, 1946. A scholarly, authoritative article for the student especially interested in this field.

UNSTABLE CHILDREN

Audio-visual

View the films *This Is Robert* and *Angry Boy*.[1] The first film deals with a little boy whose overaggressive behavior in nursery school is difficult for the other children and causes concern on the part of Robert's teacher. The film shows the teacher's careful work with Robert, in consultation with specialists, and shows, incidentally, certain special techniques used by specialists in child therapy. Robert's home situation is also analyzed and dramatized in puppet-play form. We see Robert gaining security and, consequently, showing less hostility and greater frustration tolerance as the film proceeds. Finally, Robert appears as a well-adjusted first-grade pupil. In the nursery, Robert behaved as a disturbed child. Cooperative effort on the part of a number of people, his teacher, his parents, a therapist, and Robert's peers, results in his successful readjustment. Before seeing this film, the concept of therapy in contrast to usual nursery school procedure and the concept of a "disturbed" child should be discussed fully.

This film may well be stopped at intervals for discussion led by a student leader or the instructor. It may be well to view part of it a second time.

Angry Boy deals with a disturbed school-age child, also named Robert, and shows some parts of his treatment by a psychiatrist. The family context in this film is significant. It may be helpful to assign some members of the group to identify as much as possible with Robert's mother, others with his father, others with his grandmother, and others still with Robert.

In this film, too, halting the showing from time to time for discussion and partial repetition may be advisable.

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[1] Films described on page 283.

Discussion

At this point in the course, a free and extended discussion related to the films viewed seems the best procedure. It is important for students to thrash out the question of what constitutes serious disturbance in children and to develop a wholesome attitude toward psychiatric guidance rather than a disquieting overanxiety about "maladjustment," in students themselves or in the children with whom they will be working.

Further Reading

BETTLEHEIM, BRUNO: *Love Is Not Enough,* Free Press, Glencoe, Ill., 1950. For the student especially interested in the topic, this account of work with emotionally disturbed children is very wholesome and worth while.

MOUSTAKAS, CLARK E.: *Children in Play Therapy,* McGraw-Hill Book Company, Inc., New York, 1953. Introductory chapters and as much more of the book as time allows and interest dictates.

CHAPTER XV. EGO DEVELOPMENT

Audio-visual

If possible, view *The Quiet One*[1] for its restrained portrayal of a child's flight from intolerable reality and his reeducation through satisfying human relationships, the experience of wholesome living, and wise therapy. The film does not have a "happy ending," for the end is not yet, but we see in it a magnificent effort to help a desolate child on his way toward wholesome manhood. View also *A Child Went Forth.*[2] This film shows an ideal environment for children and is a record of adult-child relationships at their best.

Discussion

1. What are the limitations of discussing "stages of human growth"?
2. What is the value of Erikson's analysis of the eight stages of man?
3. Discuss the implications of the statement that "there will be fewer fearful children when there are more courageous parents."

Further Reading

ERIKSON, ERIK HOMBURGER: *Childhood and Society,* W. W. Norton & Company, New York, 1950, Chaps. I, VII.

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[1] Film described on page 283.

[2] Film described on page 283.

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Davis, Allison, and Robert Havighurst: *Father of the Man*, Houghton Mifflin Company, Boston, 1947.

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List of Visual Aids

The visual aids listed below and on the following pages can be used to supplement the material in this book. It is recommended that the motion pictures be reviewed before using in order to determine their suitability for a particular group.

Immediately following the title of each motion picture is the abbreviation of the name of the producer; if the distributor is different from the producer, the name of the distributor follows. These abbreviations are identified in the directory of sources at the end of the bibliography. In most instances, the films can be borrowed or rented from local or state 16-mm film libraries. (A nationwide list of these local sources is given in *A Directory of 2002 16mm Film Libraries,* available for 35 cents from the Superintendent of Documents, Washington 25, D.C.) All the motion pictures listed are 16-mm, sound, black-and-white films.

Preface to a Life (UW-Castle, 28 min). Michael Thompson, whose life is the subject of this film, is introduced as a newborn infant. His father's and his mother's respective dreams for his future are pictured; a baby brother is introduced in due time. Three courses of development for Michael Thompson are shown subsequently: (1) how he would presumably develop were his father's aims for him to dominate his life; (2) the probable course of Michael's growth were his mother's aims for him to prevail; (3) the "real" Michael Thompson as he would grow to adulthood were he allowed to develop according to his own individual growth pattern.

Heredity and Prenatal Environment (McGraw, 21 min). A graphic presentation of the role played by environment in determining how an individual develops given "normal" heredity. The processes of heredity are illustrated by a cartoon representation.

Life Begins (EBF, 60 min). A condensation of Dr. Gesell's Child Development films.

Life with Baby (MOT/McGraw, 18 min). This film illustrates the nature of child development research in the Yale Psycho-Clinic and indicates main developmental trends during the preschool years.

The Terrible Twos and the Trusting Threes (McGraw, 20 min). A delightful film showing the antics of a group of two-year-olds and the behavior of the same children when they have attained the cooperative age of three.

The Frustrating Fours and the Fascinating Fives (McGraw, 22 min). The same children appearing in the film just listed, at the ages indicated by this title.

Children Growing Up with Others (BIS/UW-Castle, 32 min). A documentary film showing a group of children of various ages from infancy to twelve or thereabouts going about the business of living with others in post-war Britain. The setting suggests lower to middle-middle income status.

Children Learning by Experience (BIS/UW-Castle, 40 min). A film showing many of the same children appearing in the preceding listing learning by experiences which are of three main types: (1) self-initiated and directed by the children themselves; (2) initiated by children but guided by adults in partially structured situations; (3) planned and directed by adults. This is a thought-provoking picture, inviting the student to study when and why and how far children need the help of adults for optimum success in learning at various age levels.

It's a Small World (BIS/UW-Castle, 38 min). Life in an English nursery school, magnificently equipped and delightfully located in a crowded section of London. Excellent photography showing quite effectively how the world looks from the small child's eye level.

Wilson Dam School (NYU, 20 min). Child life in a well-planned progressive school in which teaching and learning activities employ community resources to the full.

A Day in the Life of a Five-year-old (TC, 20 min). The activities of a beautifully situated and finely equipped kindergarten group in a privileged suburban community.

Learning through Cooperative Planning (TC, 20 min). The leading characters in this film are the members of a fourth grade group in Hession Hills School. Their planning and working together in day-to-day living constitute the film's action.

Children's Emotions (McGraw, 22 min). The emotional development of children and the roles played by adults in guiding their growth are shown through filming a series of important episodes in the lives of average children in our own culture. Excellent photography and thought-provoking content.

Shy Guy (Coronet, 12 min). Toward helping the adolescent boy understand a familiar difficulty.

Are You Popular? (Coronet, 12 min). A help in answering the perennial question of the adolescent girl.

The High Wall (McGraw, 32 min). A challenging picture of social cleavages in an American community and the effect of such cleavage upon the lives of adolescent boys and girls. A serious film which does not minimize the dangers of the situation but stops short of the melodramatic.

Farewell to Childhood (Mental, 23 min). An adolescent girl works out the problem of growing up in a good middle-class American home with the help of her parents and a school counselor.

This Is Robert (NYU, 80 min). Robert is a nursery-school child whose overaggressive behavior indicates his need for special guidance. This he receives from a well-trained, permissive, nursery-school teacher, reinforced by the therapeutic skill of a psychiatrist. These efforts and a change for the better in some aspects of his home environment result in Robert's greatly improved adjustment, and at the end of the picture we see him in the first grade as a happy and successful school pupil.

Angry Boy (MS/IFB, 40 min). A boy's feelings of hostility toward an overly possessive and authoritarian mother, an ineffective father bothered by feelings of inadequacy and guilt, and a bossy, not-too-sensitive grandmother, are expressed in a series of stealing episodes, the climax of which is taking money from his teacher's pocketbook. As a result, he is referred to a guidance clinic and receives psychiatric treatment. The high lights of Robert's improvement under treatment, his relationship with the psychiatrist, and his mother's growth in self-understanding are indicated in a series of well-selected episodes.

The Quiet One (Athena, 67 min). The story of a very sick boy in a slum environment, his complete break from reality, and his gradual, painful, but finally decided progress toward recovery in the course of his residence at Wiltwyck School. A film which may be viewed many times with profit.

A Child Went Forth (Brandon, 18 min). Life in an ideal summer camp for children. An effective and enjoyable portrayal of a philosophy of education in action. (Woodlea, Salt Point, New York. Cornelia Goldsmith, Director.)

Directory of Sources

Athena—Athena Films, 165 W. 46th St., New York 19.
BIS—British Information Services, 30 Rockefeller Plaza, New York 20. (Films distributed by Castle Films Department, United World Films, Inc.)
Brandon—Brandon Films, Inc., 200 W. 57th St., New York 19.
Coronet—Coronet Films, 65 S. Water St., Chicago 1.
EBF—Encyclopaedia Britannica Films, Inc., 1150 Wilmette Ave., Wilmette, Ill.
IFB—International Film Bureau, Suite 308–316, 57 E. Jackson Blvd., Chicago 4.

McGraw—McGraw-Hill Book Company, Inc., Test-Film Department, 330 W. 42d St., New York 36.

Mental—Mental Health Film Board, 166 E. 38th St., New York 16.

MOT—March of Time Forum Films, 369 Lexington Ave., New York 17. (Films distributed by McGraw-Hill Book Company, Inc.)

MS—Michigan State Mental Hygiene Society, East Lansing, Mich. (Films distributed by International Film Bureau.)

NYU—New York University Film Library, 26 Washington Pl., New York 3.

TC—Teachers College Bureau of Publications, Columbia University, New York 27.

UW-Castle—Castle Films Department, United World Films, Inc., 1445 Park Ave., New York 29.

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